

SEARCH REQUEST FORM

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51690

Scientific and Technical Information Center

Requester's Full Name: _____ Examiner #: _____ Date: _____
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If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched.

Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

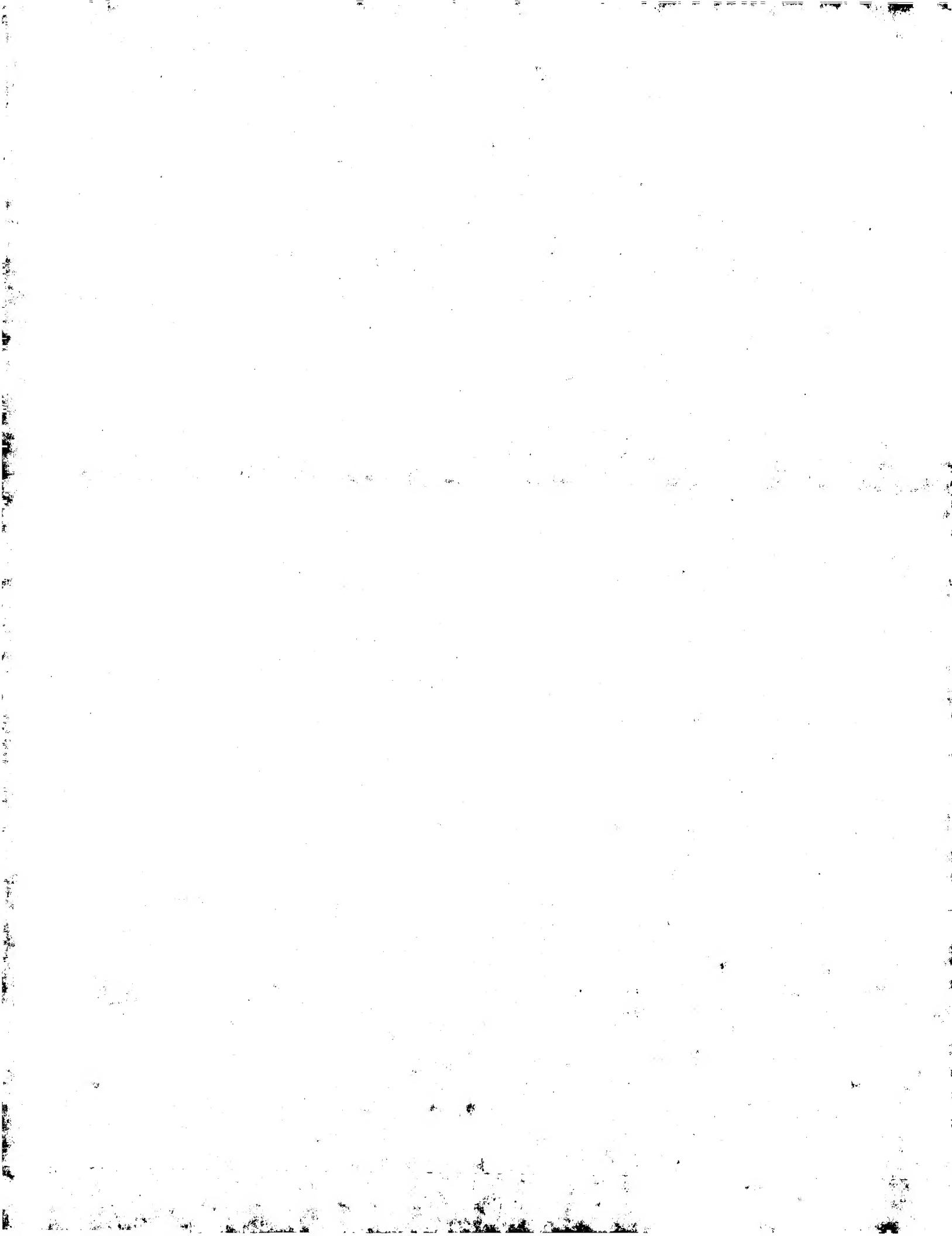
Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

BEST AVAILABLE COPY

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher	Toby Port	NA Sequence (#)	1 STN _____
Searcher Phone #	308-354	AA Sequence (#)	1 Dialog _____
Searcher Location	9126	Structure (#)	Questel/Ori. _____
Date Searcher Picked Up	9/26	Bibliographic	Dr. Link _____
Date Completed	9/28	Litigation	Lexis/Nexis _____
Searcher Prep & Review Time	10	Fulltext	Sequence Systems <u>CG</u> _____
Clerical Prep Time	-	Patent Family	WWW:Internet _____
Online Time	10	Other	Other (specify) _____



Gencore version 4.5				
Copyright (c) 1993 - 2000 Compugen Ltd.				
Run on:	September 26, 2001, 15:15:09 ; search time 21:33 Seconds (without alignments) 375.170 Million cell updates/sec			
Title:	US-09-662-783-4			
Perfect score:	737			
Sequence:	1 MYLDTPRYGRSYHDKRSKV.....DIQDHHERCDCICSSRPPR 132			
Scoring table:	BLOSUM62			
Gapop:	10.0 , Gapext 0.5			
Searched:	412676 seqs, 60623988 residues			
total number of hits satisfying chosen parameters:	412676			
Minimum DB seq length:	0			
Maximum DB seq length:	2000000000			
post-processing:	Minimum Match 0%			
	Maximum Match 100%			
	Listing first 45 summaries			
Database :				
A_Geneseq_0601.*	1: /SIDS8/gcdata/geneseq/geneseqp/AA1980.DAT: * 2: /SIDS8/gcdata/geneseq/geneseqp/AA1981.DAT: * 3: /SIDS8/gcdata/geneseq/geneseqp/AA1982.DAT: * 4: /SIDS8/gcdata/geneseq/geneseqp/AA1983.DAT: * 5: /SIDS8/gcdata/geneseq/geneseqp/AA1984.DAT: * 6: /SIDS8/gcdata/geneseq/geneseqp/AA1985.DAT: * 7: /SIDS8/gcdata/geneseq/geneseqp/AA1986.DAT: * 8: /SIDS8/gcdata/geneseq/geneseqp/AA1987.DAT: * 9: /SIDS8/gcdata/geneseq/geneseqp/AA1988.DAT: * 10: /SIDS8/gcdata/geneseq/geneseqp/AA1989.DAT: * 11: /SIDS8/gcdata/geneseq/geneseqp/AA1990.DAT: * 12: /SIDS8/gcdata/geneseq/geneseqp/AA1991.DAT: * 13: /SIDS8/gcdata/geneseq/geneseqp/AA1992.DAT: * 14: /SIDS8/gcdata/geneseq/geneseqp/AA1993.DAT: * 15: /SIDS8/gcdata/geneseq/geneseqp/AA1994.DAT: * 16: /SIDS8/gcdata/geneseq/geneseqp/AA1995.DAT: * 17: /SIDS8/gcdata/geneseq/geneseqp/AA1996.DAT: * 18: /SIDS8/gcdata/geneseq/geneseqp/AA1997.DAT: * 19: /SIDS8/gcdata/geneseq/geneseqp/AA1998.DAT: * 20: /SIDS8/gcdata/geneseq/geneseqp/AA1999.DAT: * 21: /SIDS8/gcdata/geneseq/geneseqp/AA2000.DAT: * 22: /SIDS8/gcdata/geneseq/geneseqp/AA2001.DAT: *			
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.	8			
SUMMARIES				
Result No.	Score	Query Match Length	DB ID	Description
5 - 1	737	100.0	322	AAV71129
2	737	100.0	370	AAAB48653
3	737	100.0	370	AAV71129
4	737	100.0	370	AAV71129
5	737	100.0	370	AAV71129
6	713	96.7	200	AAV71128
7	686	93.1	370	AAAB48663
8	681	92.4	370	AAAB60895
9	380	51.6	66	AAV71132
10	230	44.8	374	AAAB10639
11	328.5	44.6	149	AAAB10642

ALIGNMENTS

Result No.	Score	Query Match	Length	DB ID	Description
5 - 1	737	100.0	322	21 AAY71129	Human Platelet Der Human growth facto
	737	100.0	370	21 AAB48653	Human growth facto
- 3	737	100.0	370	21 AAY96864	SEQ. ID. 37 from W
- 4	737	100.0	370	21 AAY71130	Human Platelet Der
5 - 5	737	100.0	370	22 AAB60888	Human VEGF-G prote
- 6	713	96.7	200	21 AAY71128	Human Platelet Der
7 - 7	686	93.1	370	21 AAB48663	Mouse growth facto
8	681	92.4	370	22 AAB60895	Human VEGF-G prote
9	380	51.6	66	21 AAY71132	Human Platelet Der
10	330	44.8	374	21 AAB10639	Human VEGF-X prote
11	322.5	44.6	149	21 AAB10642	Human VEGF-X prote

PI	Oestman A,	Heldin C;	PA	(ZYMO) ZYMOGENETICS INC.
XX	WPI: 2000-376495/32.	XX	PI	Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;
DR	N-PSDB: AAD00737.	XX	XX	WPI: 2000-687541/67.
XX	XX	DR	N-PSDB: AAC81555.	DR
PT	Novel polynucleotides encoding a novel growth factor of cells expressing a platelet-derived growth factor, useful for diagnostic and therapeutic applications, e.g. concerning cancer -	XX	PT	Growth factor homologs and the nucleic acids that encode them, useful e.g. for treating liver damage, ischemia, multiple sclerosis and Alzheimer's disease -
XX	XX	PT	PT	PT
PS	Claim 25; Fig 6; 11pp; English.	XX	XX	XX
CC	The present sequence is an N-terminally truncated polypeptide of human platelet derived growth factor (PDGF)-D, formally known as vascular	CC	CC	CC
CC	Endothelial Growth Factor (VEGF)-G. It is derived from human foetal lung	CC	CC	CC
CC	lambdoid10 cDNA library. It belongs to the VEGF/PDGF family. Its functions as an activator of proliferation, differentiation, growth and motility of	CC	CC	CC
CC	cells, that express PDGF-D receptor. This sequence is useful for	CC	CC	CC
CC	inhibiting the growth of tumours, that express PDGF-D. Expression of	CC	CC	CC
CC	PDGF-D and its proteolytic cleavage for generating an activated truncated	CC	CC	CC
CC	form is useful for regulating receptor binding specificity of PDGF-D.	CC	CC	CC
CC	PDGF-D antagonist is useful for inhibiting tissue remodelling during the	CC	CC	CC
CC	invasion of tumor cells into normal cells. PDGF-D may be used to treat	CC	CC	CC
CC	wounds, atherosclerosis, metastasis and migration of smooth muscle cells.	CC	CC	CC
XX	XX	CC	CC	CC
SQ	Sequence 322 AA;	Score 100.0%; Score 737; DB 21; Length 322;	Query Match	100.0%;
		Best Local Similarity 100.0%; Pred. No. 1.1e-73;	Best Local Similarity	100.0%;
		Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	Matches	132;
QY	1 MYLDTPRYRGRSYHDKRSKVDLDRNDAKRYSTCPRNYSYNIREELKLANVFFPRCLL 60	QY	1 MYLDTPRYRGRSYHDKRSKVDLDRNDAKRYSTCPRNYSYNIREELKLANVFFPRCLL 60	QY
Db	191 myldtpyrgryhdkskvdldrndakrysctpnysvireeklanvvffprcll 250	Db	191 myldtpyrgryhdkskvdldrndakrysctpnysvireeklanvvffprcll 250	Db
QY	61 YQRCGGNCGGTNVWRSGCTCNSGKTVKYHEVLFQFEPGHIKRGRAKTMALVDIQLDHHE 120	QY	61 YQRCGGNCGGTNVWRSGCTCNSGKTVKYHEVLFQFEPGHIKRGRAKTMALVDIQLDHHE 120	QY
Db	251 vqrccgncgcgtvwnrsctnsgktvkkyhevlfqfepghikrgraktmalvdighhe 310	Db	251 vqrccgncgcgtvwnrsctnsgktvkkyhevlfqfepghikrgraktmalvdighhe 310	Db
QY	121 RDCDICCSRPRR 132	QY	121 RDCDICCSRPRR 132	QY
Db	311 rdcicssrrpr 322	Db	311 rdcicssrrpr 322	Db
RESULT	2	Query Match	100.0%;	RESULT
ID	AAB48653 standard; Protein: 370 AA.	Best Local Similarity	100.0%;	ID
XX	XX	Matches	132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	AAV96864 standard; Protein: 370 AA.
AC	AAB48653;	XX	XX	XX
XX	XX	XX	XX	XX
DT	09-MAR-2001 (first entry)	XX	XX	XX
XX	XX	XX	XX	XX
DE	Human growth factor homologue zvegf4, SEQ ID NO:2.	XX	XX	XX
XX	Human; zvegf4; growth factor homologue; VEGF/PDGF Family;	XX	XX	XX
KW	CUB domain; PDGF-like activity; mitogenic; osteogenic;	XX	XX	XX
KW	neovascularisation; tissue repair; proliferation; differentiation;	XX	XX	XX
KW	liver damage; neuroregeneration; Alzheimer's disease; multiple sclerosis;	XX	XX	XX
KW	periodontal disease; bone fracture; wound healing; vulnerability; ischaemia;	XX	XX	XX
KW	immunomodulation; hepatic; chromosome 11q22.3-23.1.	XX	XX	XX
OS	Homo sapiens.	XX	XX	XX
PN	W0200066736-A1.	XX	XX	XX
XX	XX	XX	XX	XX
PD	09-NOV-2000.	XX	XX	XX
XX	XX	XX	XX	XX
PF	03-MAY-2000; 2000WO-US40047.	XX	XX	XX
XX	XX	XX	XX	XX
PR	03-MAY-1999; 99US-0304216.	XX	XX	XX
PR	10-NOV-1999; 99US-0164463.	DE	DE	DE
PR	04-FEB-2000; 2000US-0180169.	XX	XX	XX
XX	XX	XX	XX	XX
RESULT	3	XX	XX	XX
ID	AAV96864	XX	XX	XX
AC	AAV96864;	XX	XX	XX
XX	XX	XX	XX	XX
DT	26-SEP-2000 (first entry)	XX	XX	XX
SEQ	ID. 37 from WO0034474.	XX	XX	XX
KW	Vascular endothelial growth factor; homologue; zvegf3; CUB domain;	XX	XX	XX

KW	Cysteine knot; Platelet-derived growth factor; PDGF; neuropilin;	Db	359 rcdcicsrpr 370
KW	chromosome 4q28.3; cytostatic; anti-psoriatic; anti-inflammatory;		
KW	anti-diabetic; ophthalmological; anti-rheumatic; anti-arthritis;		
XX	vulnearly.		
OS	Homo sapiens.	RESULT 4	
XX	WO200034474-A2.	AAV71130 standard; Protein; 370 AA.	
PN		XX	
XX		AC AAV71130;	
PD	15-JUN-2000.	XX	
XX		DT 08-SEP-2000 (first entry)	
PF	07-DEC-1999; 99WO-US28968.	XX	
XX		DE Human Platelet Derived Growth Factor (PDGF)-D protein.	
PR	07-DEC-1999; 98US-0207120.	XX	
PR	06-JUL-1999; 99US-0142576.	XX	
PR	21-OCT-1999; 99US-0161633.	KW Platelet Derived Growth Factor-D; PDGF-D; human; cytostatic; vulnerable;	
PR	12-NOV-1999; 99US-0165255.	KW VEGF-G; Vascular Endothelial Growth Factor; antiatherosclerotic; tumour;	
XX		KW proliferative; activation; proliferation; differentiation; motility;	
PA	(ZYMO) ZYMOGENETICS INC.	KW growth; PDGF-D receptor; antagonist; tissue remodelling; treat;	
XX		KW atherosclerosis; wound; metastasis.	
PI	Gao Z, Hart CE, Piddington CS, Sheppard PO, Shoemaker KE;	XX	
PI	Gilbertson DG, West JW;	OS Homo sapiens.	
XX		Location/Qualifiers	
DR	WPI; 2000-423420/36.	52..170	
DR	N-PSDB; AAA51541.	/label= "CUB_domain	
XX		/note= "Participates in protein-protein or carbohydrate	
PT	Novel zvegf3 polypeptides and nucleotides encoding them useful for	interactions"	
PT	stimulating growth of smooth muscle cells and fibroblasts comprising an	PT	
PT	epitope bearing portion of a specific amino acid sequence	PT	
XX		Cleavage-site	
BS	Disclosure; Page 164-165; 173pp; English.	254..257	
XX		/label= "Proteolytic_site	
XX		/note= "Dibasic motif"	
PN	WO200027879-A1.	XX	
XX		W0200027879-A1.	
CC	Polypeptides comprising an epitope-bearing portion human or murine	XX	
CC	ZVEGF3 (vascular endothelial growth factor homologue) are claimed. The	PD 18-MAY-2000.	
CC	growth factors comprise a growth factor domain and CUB domain (generic	XX	
CC	sequence motifs are shown in AAY96639 and AA196860). The growth factor	PF 10-NOV-1999;	
CC	domain is characterized by an arrangement of cysteine residues and	PF 10-NOV-1999;	
CC	beta-strands that is characteristic of the "cysteine knot" structure of	PR 28-DEC-1998;	
CC	the platelet-derived growth factor (PDGF) family. The CUB domain shows	PR 28-DEC-1998;	
CC	homology to CUB domains in neurofilins, human bone morphogenetic	PR 10-NOV-1998;	
CC	protein-1, porcine seminal plasma protein, bovine acidic seminal fluid	PR 26-AUG-1999;	
CC	protein and Xenopus laevis tollloid-like protein. Structural analysis and	PR 04-OCT-1999;	
CC	homology predict to form multimeric proteins. The human zvegf3 gene has been	PR 05-OCT-1999;	
CC	mapped to chromosome 4q28.3. ZVEGF3 is useful for stimulating the growth	PR 05-OCT-1999;	
CC	of fibroblasts or smooth muscles cells, for activating cell surface	XX	
CC	PDGF- α receptor and for inhibiting PDGF- α receptor mediated	PA (LUDWIG INST CANCER RES.	
CC	cellular processes. ZVEGF3 is useful for regulating (post-development)	(UYHE) UNIV HELSINKI LICENSING LTD OY.	
CC	organ growth, regeneration and maintenance, as well as tissue	PA Eriksson U, Aase K, Ponten A, Lee X, Utetela M, Alitalo K;	
CC	maintenance and repair processes. ZVEGF3 antagonists are useful for	PI Oestman A, Heidin C;	
CC	treating cancer, rheumatoid arthritis, diabetic retinopathy, ischemic	XX	
CC	limb disease, peripheral vascular disease, myocardial ischemia, vascular	DR WPI: 2000-376495/32.	
CC	intimal hyperplasia, atherosclerosis, wound healing, chronic liver	N-PSDB; AA00738.	
CC	disease and haemangioma formation. ZVEGF3 can also be used to modulate	XX	
CC	neurite growth and development of the nervous system, and for treating	PT Novel polynucleotides encoding a novel growth factor of cells	
CC	neurodegenerative diseases.	PT expressing a platelet-derived growth factor, useful for diagnostic and	
XX		PT therapeutic applications, e.g. concerning cancer -	
Sequence	370 AA;	XX	
XX		PS Claim 25; Fig 8; 111pp; English.	
CC	The present sequence is the complete human platelet derived growth factor	XX	
CC	(PDGF)-D, formally known as vascular Endothelial Growth Factor (VEGF)-G.	CC	
CC	It is derived from human foetal lung lambdgt10 cDNA library. It belongs	CC	
CC	to the VEGF/PDGf family. It functions as an activator of proliferation,	CC	
CC	differentiation, growth and motility of cells, that express PDGF-D	CC	
CC	receptor. This sequence is useful for inhibiting the growth of tumours,	CC	
CC	that express PDGF-D. Expression of PDGF-D and its proteolytic cleavage	CC	
CC	for generating an activated truncated form is useful for regulating	CC	
CC	receptor binding specificity of PDGF-D. PDGF-D antagonist is useful for	CC	
CC	inhibiting tissue remodelling during the invasion of tumour cells into	CC	
CC	normal cells. PDGF-D may be used to treat wounds, atherosclerosis,	CC	
CC	metastasis and migration of smooth muscle cells.	XX	
SQ	Sequence 370 AA;	SQ Sequence 370 AA;	
Query	Query Match Score 737; DB 21; Length 370;	Query Match Score 737; DB 21; Length 370;	
Best Local Similarity 100.0%; Pred. No. 1..3e-73;	Best Local Similarity 100.0%; Pred. No. 1..3e-73;	Best Local Similarity 100.0%; Pred. No. 1..3e-73;	
Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
Oy 1 MYLDTPRYGRGSYHDKRSKVDLNDDAKRYSTCPRNYSVNIREFKLANKVFFPRCLL 60	Oy 1 MYLDTPRYGRGSYHDKRSKVDLNDDAKRYSTCPRNYSVNIREFKLANKVFFPRCLL 60	Oy 1 MYLDTPRYGRGSYHDKRSKVDLNDDAKRYSTCPRNYSVNIREFKLANKVFFPRCLL 60	
Db 239 myldtprygrgsyhdkrskvdldndakrystcpnysvniorefklankvffprcll 298	Db 239 myldtprygrgsyhdkrskvdldndakrystcpnysvniorefklankvffprcll 298	Db 239 myldtprygrgsyhdkrskvdldndakrystcpnysvniorefklankvffprcll 298	
Oy 61 VORCGNCGGCTVNRSCTCNSGKRYKKYHEVQFEPGHIKRRGAKTMAVLQDHHE 120	Oy 61 VORCGNCGGCTVNRSCTCNSGKRYKKYHEVQFEPGHIKRRGAKTMAVLQDHHE 120	Oy 61 VORCGNCGGCTVNRSCTCNSGKRYKKYHEVQFEPGHIKRRGAKTMAVLQDHHE 120	
Db 299 vqrccgncgcgtvnrsctcnsqtkvkyhevlfqefpgihkrgraktmalvdqldhhe 358	Db 299 vqrccgncgcgtvnrsctcnsqtkvkyhevlfqefpgihkrgraktmalvdqldhhe 358	Db 299 vqrccgncgcgtvnrsctcnsqtkvkyhevlfqefpgihkrgraktmalvdqldhhe 358	
Qy 121 RDCICSSRPRP 132	Qy 121 RDCICSSRPRP 132	Qy 121 RDCICSSRPRP 132	

XX SQ Sequence 200 AA; Score 96.7%; Best Local Similarity 97.7%; Matches 129; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 MYLDTTRYGRGSYHDKRSKVDDRLNDDAKRYSCTPRNSVNIREEELKLANVFFPRCLL 60
DB 69 myltdtrygrgsyhdkskvddrlnddakryscprnsvnireeelklanvffprcll 128

OY 61 VORCGENCGCCTVNRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKTMAVDIQLDHHE 120
DB 129 vrcgencgcctvklesctngskvckevtkyhevlgqepghikrrgraktmalvdqldhhe 188

OY 121 RDCDCIGSSRPPR 132
DB 189 rdcclccssrppr 200

CC fusions; expression constructs and host cells comprising human zvegf4
CC nucleic acids; the recombinant expression of human zvegf4; an antibody
CC which binds to human zvegf4 or a fragment thereof; a method of activating
CC a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a
CC method of modulating the proliferation, differentiation, migration or
CC metabolism of bone cells, comprising exposing bone cells to
CC zvegf4-derived polypeptides; and a method of detecting a genetic
CC abnormality in the zvegf4 gene of a patient. Zvegf4 proteins and derived
CC fragments may be used to stimulate tissue development or repair, or
CC cellular differentiation or proliferation. They are particularly used for
CC the treatment or repair of liver damage, and may also be used to
CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or
CC multiple sclerosis). Due to their osteogenic activity, they may be used
CC in the treatment of periodontal disease and fractures. They may also be
CC used to enhance expansion and mobilisation of haematopoietic stem cells
CC and endothelial precursor stem cells, which may be useful in the
CC treatment of ischaemia, in wound healing, and in the modulation of the
CC immune system. The present sequence represents mouse zvegf4.

Sequence 370 AA;
SQ

RESULT 7

AAB48663 standard; Protein; 370 AA.
XX AAB48663;
XX DT 09-MAR-2001 (first entry);
XX DE Mouse growth factor homologue zvegf1, SEQ ID NO:53.
XX PR 03-MAY-1999; 99US-0304216.
XX PR 10-NOV-1999; 99US-0164453.
XX PR 04-FEB-2000; 2000US-0180169.
XX PA (ZYMO) ZYMOGENETICS INC.
XX PI Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;
XX DR WPI; 2000-687541/67.
XX DR N-PSDB; AAC81596.
XX PS Example 19; Page 138-140; 143pp; English.
XX PR Growth factor homologs and the nucleic acids that encode them, useful
PT e.g. for treating liver damage, ischemia, multiple sclerosis and
PT Alzheimer's disease -
XX PS Example 19; Page 138-140; 143pp; English.
XX CC The invention relates to the human growth factor homologue zvegf4
CC (AAC81553), and nucleic acids encoding it (AAC81555). Zvegf4 is a member
CC of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial
CC growth factor) family. Zvegf4 has a growth factor domain (AA848654)
CC characterised by a PDGF cystine knot structure, and a CUB domain
CC (AAC84855) which has a beta barrel structure. Zvegf4 has PDGF-like
CC activity, having mitogenic activity on fibroblasts, vascular smooth
CC muscle cells and pericytes, and has also been shown to stimulate bone
CC growth. The invention also relates to fusion proteins comprising human
CC zvegf4 or fragments thereof, particularly human zvegf4/human zvegf3

Query Match 96.7%; Score 686; DB 21; Length 370;
Best Local Similarity 90.2%; Pred. No. 5.9e-68;
Matches 119; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

QY 1 MYLDTTRYGRGSYHDKRSKVDDRLNDDAKRYSCTPRNSVNIREEELKLANVFFPRCLL 60
Db 239 lyldphygrgsyhdkskvddrlnddvlkyrsctprnsvnireeelklnavffprcll 298

QY 61 VORCGENCGCCTVNRSCTCNSGKTVKKYHEVLQFEPGHIKRRGRAKTMAVDIQLDHHE 120
Db 299 vrcgencgcctvklesctngskvckevtkyhevlgqepghikrrgraktmalvdqldhhe 358

QY 121 RDCDCIGSSRPPR 132
Db 359 rdcclccssrppr 370

RESULT 8

AAB60895 standard; protein; 370 AA.
ID AAB60895
XX AC AAB60895;
XX DT 02-APR-2001 (first entry)
XX DE Human VEGF-G protein.
XX KW Vascular endothelial growth factor; VEGF; cancer; cell;
KW angiogenesis.
XX OS Homo sapiens.
XX PN WC0200100878-A2.
XX PD 04-JAN-2001.
XX PF 29-JUN-2000; 2000WO-US18085.
XX PR 30-JUN-1999; 99US-0343671.
XX PA (MILL-) MILLENNIUM PHARM INC.
XX Gearing DP;
XX DR WPI; 2001-05-0129/06.
XX PT New vascular endothelial growth factor family member used for diagnosis
PT and treatment of deregulated cell growth e.g. cancer, disorders
PT involving aberrant angiogenesis e.g. psoriasis, and chronic
PT inflammatory diseases -
XX

PS Claim 2; Fig 8; 142pp; English.

XX The present invention relates to a vascular endothelial growth factor (VEGF) family member, VEGF-G. VEGF-G protein and nucleic acid molecules are used as modulating agents or as targets for developing modulating agents to regulate a variety of cellular processes e.g. cell proliferation, differentiation, migration and wound repair. VEGF-G modulators, i.e. VEGF-G protein, peptide, peptidomimetic or nucleic acid are used to treat a subject with aberrant VEGF-G protein or nucleic acid expression or activity e.g. deregulated cell growth, such as cancer, hyperproliferative bone disorders, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases e.g. rheumatoid arthritis. VEGF-G gene expression is inhibited through the administration of antisense molecules or ribozymes and by targeting the regulatory region of VEGF-G to prevent transcription of the gene in target cells.

XX Sequence 370 AA;

Query Match 92.4%; Score 601; DB 22; Length 370;

Best Local Similarity 89.4%; Pred. No. 2.1e-67; Mismatches 7; Indels 0; Gaps 0;

SQ 1 MYLDTPYRGRSYDRKSVDLDRNDAKSYRSCPTPNYSVNLREELKLANVVFPRCLL 60
Db - 239 lyldtpyrgrydrksvdldrndaksvrscptpnysvnlreelklnavfprcll 298

QY 61 VQRGGNGCGGTWNRSGTCNSGKTVKKYHEVILQFERGHIKRRGAKTMALVDIQLDHH 120
Db 299 vqrccgncgcgtvnwksctssgktvkkyhevilkfepghfkrrgaknmpivdqiidhhe 358

QY 121 RCDCICSSRPPR 132
Db 359 rcdicssrppr 370

RESULT 9
ID AAY71132 standard; peptide: 66 AA.

XX AAY71132;
AC AAB10639;
DT 08-SEP-2000 (first entry)

DE Human Platelet Derived Growth Factor (PDGF)-D partial polypeptide # 3.

XX Platelet Derived Growth Factor-D; PDGF-D; human; cytosolic; tumour; VEGF-G; vascular Endothelial Growth Factor; antiatherosclerotic; tumour; proliferation; activator; Proliferation; differentiation; motility; growth; PDGF-D receptor; antagonist; tissue remodelling; treat; atherosclerosis; wound; metastasis.

XX Homo sapiens.
OS WO2000027879-A1.

PN 18-MAY-2000.
XX 10-NOV-1999; 99WO-US264462.

PF XX 10-NOV-1998; 99US-0107852.

PR XX 28-DEC-1998; 98US-0113997.

PR XX 26-AUG-1999; 99US-0150604.

PR XX 04-OCT-1999; 99US-0157108.

PR XX 05-OCT-1999; 99US-0157756.

PA (LUDWIG INST CANCER RES. (UYHE-) UNIV HELSINKI LICENSING LTD QY.

PA XX Eriksson U, Aase K, Ponten A, Lee X, Utela M, Alitalo K;

PI PI Dhanaraj SN, Xu J, Gordon RD, Sprengel JJ, Yon JR,

PI Dijkmans JJJ, Gosiewska A;

XX XX

DR WPI; 2000-376495/32.
DR N-FSDB; AAD00739.

XX Novel polynucleotides encoding a novel growth factor of cells expressing a platelet-derived growth factor, useful for diagnostic and therapeutic applications, e.g. concerning cancer -
XX Disclosure; Fig 2; 111pp; English.

XX The present sequence is the partial C-terminal end polypeptide #3, of human platelet derived growth factor (PDGF)-D, formally known as Vascular Endothelial Growth Factor (VEGF)-G. It is derived from a human expressed sequence tag (EST) AT488780. It belongs to the VEGF/PDGF family. It functions as an activator of proliferation, differentiation, growth and motility of cells, that express PDGF-D receptor. This sequence is useful for inhibiting the growth of tumours, that express PDGF-D. Expression of PDGF-D and its proteolytic cleavage for generating an activated truncated form is useful for regulating receptor binding specificity of PDGF-D. PDGF-D antagonist is useful for inhibiting tissue remodelling during the invasion of tumour cells into normal cells. PDGF-D may be used to treat wounds, atherosclerosis, metastasis and migration of smooth muscle cells.

XX SQ Sequence 66 AA;

XX Query Match 51.6%; Score 380; DB 21; Length 66;

CC Best Local Similarity 100.0%; Pred. No. 6.4e-35;
CC Mismatches 0; Indels 0; Gaps 0;

CC Matches 66; Conservative 0;

CC CC 67 NGCGGTNVWRSTCNNSGKTVKKYHEVILQFERGHIKRRGAKTMALVDIQLDHHHERCDCIC 126

CC Db 1 negcggtnvwrstcnnsgktvkkyhevilqferghikrrgaktmalvdqidhhhercdcic 60

CC QY 127 SSRPPR 132

CC Db 61 ssrppr 66

CC RESULT 10
XX AAB10639 standard; Protein: 374 AA.

XX ID AAB10639

XX AC AAB10639;

XX DT 19-JAN-2001 (first entry)

XX DE Human VEGF-X protein for expression in mammalian systems.

XX KW Human VEGF-X; vascular endothelial growth factor; human; vulnerability; antirheumatic; antiarthritic; antipsoriatic; treatment; angiogenesis regulator; vascular regulator; cancer; psoriasis; rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair; tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore; venous sore; diabetic ulcer; burns; skin graft growth.

XX OS Homo sapiens.

XX PN WO2000037641-A2.

XX XX 29-JUN-2000.

XX PR 21-DEC-1999;

XX PR 22-DEC-1998; 98GB-0028377.

XX PR 18-MAR-1999; 99US-0124957.

XX PR 08-NOV-1999; 99US-0164131.

XX (JANCS) JANSSEN PHARM NV.

XX XX

XX Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJJ,

XX Dhanaraj SN, Xu J, Eriksson U, Ponten A, Lee X, Utela M, Alitalo K;

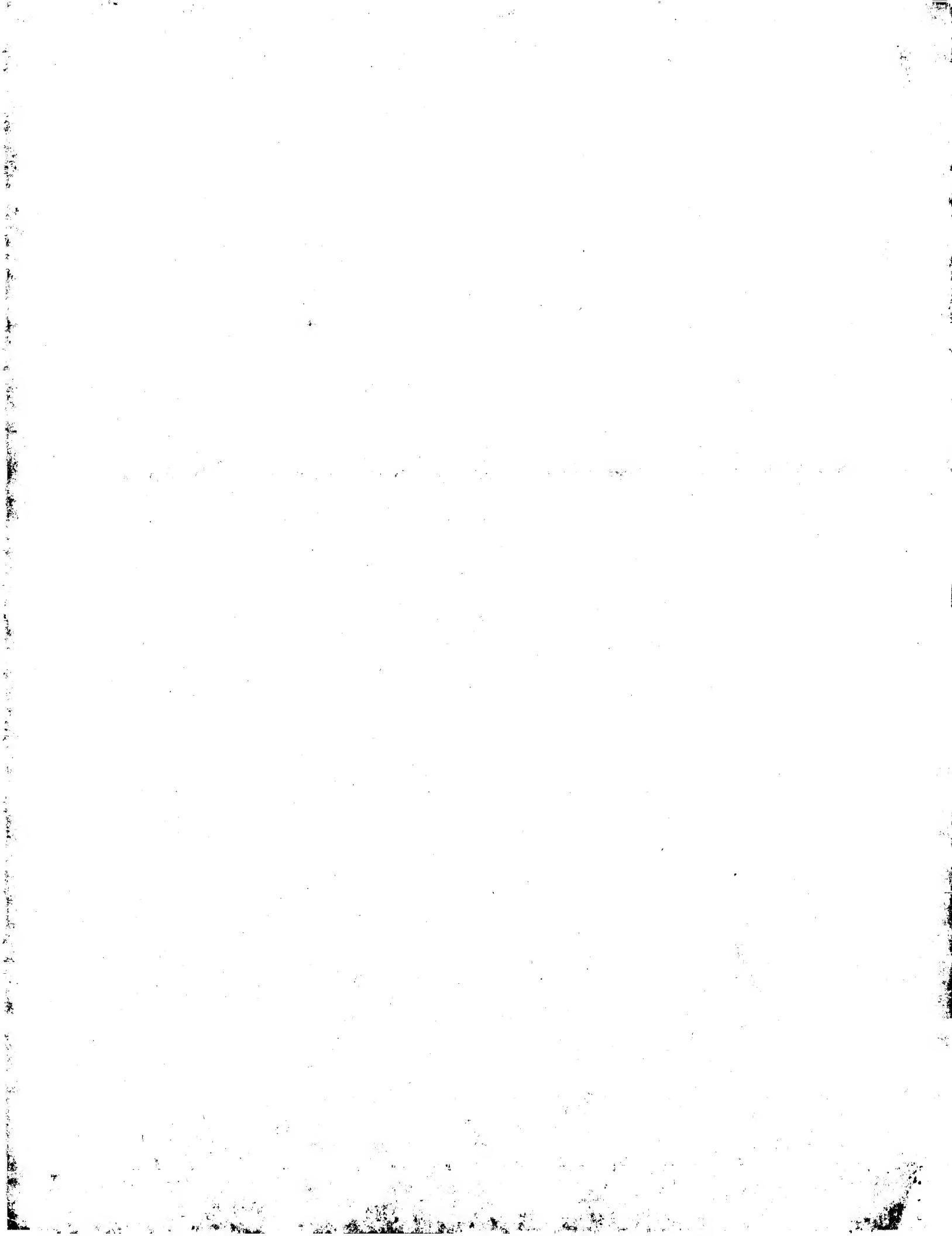
XX PI PI Dijkmans JJJ, Gosiewska A;

XX XX

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FT	/note=	"encoded by AAS"
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PD	06-APR-2000.	
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PF	30-SEP-1999;	99WO-US22668.
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PR	30-SEP-1998;	98US-0102461.
PR	12-NOV-1998;	98US-0108109.
PR	03-DEC-1998;	98US-0110749.
PR	18-DEC-1998;	98US-0113002.
PR	21-MAY-1999;	99US-0135426.
PR	15-JUL-1999;	99US-0144022.
XX		
PA	(LUDW-) LUDWIG INST CANCER RES. (UYHE-) UNIV HELSINKI LICENSING LTD.	
XX		
PI	Eriksson U, Aase K, Lee X, Ponten A, Utela M, Alitalo K;	
PI	Oestman A, Heldin C, Betsholtz C;	
XX		
DR	WPI; 2000-292954/25.	
DR	N-PSDB; AAA12524.	
XX		
PT	Novel DNA encoding PDGF-C useful to stimulate or enhance proliferation, differentiation, growth and motility of cells expressing the PDGF-C receptor -	
XX		
PS	Disclosure; Fig 4; 135pp; English.	
XX		
CC	The present sequence represents a human platelet-derived growth factor C (PDGF-C) (formally designated vPGF-F) fragment. PDGF-C polypeptides have the ability to stimulate and enhance proliferation or differentiation, and/or growth or motility of cells expressing a PDGF-C receptor.	C
CC	PDGF-C polypeptides can be used in pharmaceuticals for promoting cell proliferation, preferably in combination with one other growth factor and heparin. Pharmaceuticals comprising PDGF-C polypeptides can also be used for stimulating connective tissue or wound healing. The	C
CC	PDGF-C Polypeptides can be enzymatically processed to generate the active truncated form of PDGF-C and used to regulate the receptor-binding specificity of PDGF-C. PDGF-C can also be used to promote fibroblast mitogenesis in a mammal and to induce PDGF alpha receptor activation.	C
CC	PDGF-C antagonists can be used to inhibit tumour growth of a tumour expressing PDGF-C in a mammal. Specific types of human tumours, e.g. choriocarcinoma, Wilms tumour, megakaryoblastic leukaemia, lung carcinoma and erythroleukemia, can be identified by testing for expression of PDGF-C. PDGF-C antagonists can also be used to inhibit tissue remodelling during invasion of tumour cells into a normal population of cells. Antagonists can also be used to treat fibrotic conditions, especially found in the lung, kidney or liver.	C
CC	XX	
Sequence	318 AA;	
Score	44.63;	Score 328.5; DB 21; Length 318;
Best Local Similarity	49.28;	Pred. No. 2.1e-28; Mismatches 20; Indels 5; Gaps 3;
Matches	63; Conservative	
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Qy	59 LIVQRGGCGNCGGCTVNWRSCTCNSGKTVKYHEVLOFEPGHIKRRGRAKTMAVLDFOLDH 118 Db 248 11vkrcgncac1hncneqcgcpskvtkyhevqirp--ktgyrglkhsltdvalh 304	Qy 1 MYLDTPRYGRSY-HDRKSKV-VDLDRNDAKRYSCPRNYSVNIREBLKLANVVPPRC 58 Db 209 lyrtpwqlgkafvfgksrvdnltteevlyscprnfsvireekrttdifwpgc 268
Qy	119 HFRCDCTC 126 Db 305 heedcvvc 312	Qy 59 LIVQRGGCGNCGGCTVNWRSCTCNSGKTVKYHEVLOFEPGHIKRRGRAKTMAVLDFOLDH 118 Db 269 11vkrcgncac1hncneqcgcpskvtkyhevqirp--ktgyrglkhsltdvalh 325

PR 09-APR-1998; 98US-00811195.
 PR 09-APR-1998; 98US-0081203.
 PR 09-APR-1998; 98US-0081229.
 PR 09-APR-1998; 98US-0081817.
 PR 15-APR-1998; 98US-0081838.
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 PR 21-APR-1998; 98US-0081955.
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 PR 23-APR-1998; 98US-0082757.
 PR 27-APR-1998; 98US-0083336.
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 PR 29-APR-1998; 98US-0083505.
 PR 29-APR-1998; 98US-0083554.
 PR 29-APR-1998; 98US-0083556.
 PR 30-APR-1998; 98US-0083559.
 PR 05-MAY-1998; 98US-0083742.
 PR 06-MAY-1998; 98US-0084144.
 PR 06-MAY-1998; 98US-0084411.
 PR 07-MAY-1998; 98US-0084598.
 PR 07-MAY-1998; 98US-0084627.
 PR 07-MAY-1998; 98US-0084631.
 PR 07-MAY-1998; 98US-0084639.
 PR 07-MAY-1998; 98US-0084640.
 PR 07-MAY-1998; 98US-0084643.
 PR 13-MAY-1998; 98US-0085323.
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 PR 15-MAY-1998; 98US-0085573.
 PR 15-MAY-1998; 98US-0085579.
 PR 15-MAY-1998; 98US-0086430.
 PR 18-MAY-1998; 98US-0085589.
 PR 22-MAY-1998; 98US-0085589.
 PR 22-MAY-1998; 98US-0086414.
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 PR 22-MAY-1998; 98US-0086488.
 PR 28-MAY-1998; 98US-0085704.
 PR 28-MAY-1998; 98US-0086023.
 PR 28-MAY-1998; 98US-0087106.
 PR 30-JUL-1998; 98US-0094651.
 PR 11-SEP-1998; 98US-0100038.

XX (GETH) GENENTECH INC.
 XX Wood WI, Goddard A, Gurney A, Yuan J, Baker KP, Chen J;
 XX DR WPI: 1999-551358/46.
 XX DR N-PSDB; AA34296.
 PR New secreted and transmembrane polypeptides and their polynucleotides,
 PR useful for treating blood coagulation disorders, cancers and cellular
 PR adhesion disorders.
 XX Claim 12; Fig 207; 530pp; English.
 XX CC The present invention describes secreted and transmembrane polypeptides
 CC and their polynucleotides. The nucleotide sequences are useful as



OM of: US-09-662-783-4 to: EST:* out_format : pfs
 Date: Sep 26, 2001 8:31 PM
 About: Results were produced by the GenCore software, version 4.5.
 Copyright (c) 1993-2000 Compugen Ltd.

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DEFINITION				
ACCESSION	AK003359			
VERSION	AK003359_1			
KEYWORDS	CAP trapper			
SOURCE	Mus musculus (strain:C57BL/6J)	18 days embryo cDNA to mRNA, clone lib:RIKEN full-length enriched mouse cDNA library clone:110003109.		
ORGANISM	Mus musculus	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognath; Muridae; Murinae; Mus.		
REFERENCE	1 (sites)			
AUTHORS	Carninci,P. and Hayashizaki,Y.			
TITLE	High-efficiency full-length cDNA cloning			
JOURNAL	Methods Enzymol.	303, 19-44 (1999)		
REFERENCE	2 (sites)			
AUTHORS	Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Y.			
TITLE	Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes			
JOURNAL	Genome Res.	10 (10), 1617-1630 (2000)		
REFERENCE	3 (sites)			
AUTHORS	Shibata,K., Itoh,M., Aizawa,K., Nagaoaka,S., Sasaki,N., Carninci,P., Kono,H., Akiyama,J., Nishi,K., Kitsumai,T., Tashiro,H., Itoh,M., Kikuchi,N., Ishii,Y., Nishizane,A., Hizume,T., Marumoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Harada,A., Yamamoto,I., Ohara,E., Kashiwagi,K., Fujiwaki,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Wakahiki,M., Yoneda,Y., Ishikawa,T., Tanaka,T., Matsura,S., Okazaki,Y., Muramatsu,M., Inoue,Y., and Hayashizaki,Y.			
TITLE	RTGEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer			
JOURNAL	Genome Res.	10 (11), 1757-1771 (2000)		
REFERENCE	4 (sites)			
AUTHORS	The RIKEN Genome Exploration Research Group Phase II Team and FANTOM Consortium			
TITLE	Functional annotation of a full-length mouse cDNA collection			
JOURNAL	Nature	409, 685-690 (2001)		
REFERENCE	5 (bases 1 to 1796)			
AUTHORS	Adachi,J., Aizawa,K., Akahira,S., Akimura,T., Aono,H., Furuno,M., Arakawa,T., Hara,A., Hayatsu,N., Hiramoto,K., Fukunishi,Y., Kato,H., Kawai,J., Hanagaki,T., Itoh,M., Hiraoka,T., Hori,F., Imotsuki,K., Ishii,Y., Itoh,M., Izawa,M., Kato,H., Kawai,J., Koijima,Y., Konno,K., Kouda,M., Koya,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Nishi,N., Nomura,K., Nomazaki,R., Ohno,M., Okazaki,Y., Okido,T., Owa,C., Saito,H., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki,D., Shibata,K., Shiba,Y., Shinagawa,A., Shiraki,T., Sorabe,Y., Tagami,M., Tagawa,A., Takehashi,T., Tanaka,T., Tejima,Y., Toda,T., Yamamura,T., Yasunishi,A., Yoshida,K., Muramatsu,M., and Hayashizaki,Y.			
TITLE	Direct Submission			
JOURNAL	Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Seehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail: genome-resgsc.riken.go.jp, Tel: 81-45-503-9222, Fax: 81-45-503-9216), Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.			
COMMENT	CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.			

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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.					
REFERENCE	1 (bases 1 to 560)				
AUTHORS	Hegde, P., Qi, R., Abernathy, K., Dharap, S., Gaspard, R., Gay, C., Holt, J.E., Saeed, A.I., Sharov, V.V., Lee, N.H., Yeatman, T.J. and Quackenbush, J.				
TITLE	Assessment of gene expression patterns in a model of colon tumor metastasis using a 19,200 element cDNA microarray				
JOURNAL	Unpublished (2000)				
COMMENT	Contact: John Quackenbush The Institute for Genomic Research 9712 Medical Center Dr., Rockville, MD 20850, USA				
TEL:	301 838 3528				
FAX:	301 838 0208				
Email:	Johnq@igs.org				
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 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 304)
 AUTHORS Ottenwaelder, B., Obermaier, B., Mewes, H.W., Gassenhuber, J. and Wiemann, S.
 TITLE EST (Ottenwaelder, et al.)
 JOURNAL Unpublished (1999)
 COMMENT Contact: Ottenwaelder B
 MIPS Am Klopferspitz 18a D-82152 Martinsried, Germany
 This is the 5' sequence of the clone insert.
 Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DKFZ), Email: s.wiemann@dkfz-heidelberg.de; sequenced by MediGenomix (Martinsried, Germany) within the cDNA sequencing consortium of the German Genome Project. No s1 sequence available.
 This clone (DKFZP586J0421) is available at the RZPD in Berlin.
 Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059 Berlin - Charlottenburg, GERMANY; Email: clone@rzpd.de.
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KEYWORDS EST.

SOURCE homo sapiens

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 523)

REFERENCE NIH-MGC http://mgc.ncbi.nih.gov/.

AUTHORS Unpublished (1999)

TITLE COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgraphs-r@mail.nih.gov
Tissue Procurement: ARCC

CDNA Library Preparation: ClONETECH Laboratories Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

CDNA Sequencing by: Incyte Genomics, Inc.

Clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov

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FEATURES source

1. .523

/organism="Homo sapiens"
/db_xref="Taxon_9606"
/clone="IMAGE:3930045"
/clone_lib="NIH_MGC_56"
/tissue_type="primitive neuroectoderm"
/lab_host="TDH10B (T1 phage-resistant)"
/note="Organ: brain; Vector: pDNR-LIB (Clontech); Site_1: SII (ggccatccatggcc) Site 2: SII (ggccatccatggcc); Site_3: SII (ggccatccatggcc) Site 4: SII (ggccatccatggcc) Site 5: Double stranded CDNA was prepared from cell line RNA. 5, and 3 adaptors were used in cloning as follows: 5' adaptor sequence: 5'-ATCTAGAGGCCGAGGGGGCACATG-dT(30)BN 3' (where B = A, C, or G and N = A, C, G, or T). Average insert size 1.65 kb (range 0.9-4.0 kb). 15/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA)."

BASE COUNT 147 a 118 c 129 g 128 t 1 others

ORIGIN

alignment_scores:

Quality:	294.50	Length:	128
Ratio:	3.068	Gaps:	3
Percent Similarity:	75.000	Percent Identity:	49.219

alignment_block:
US-09-662-783-4 x BE958470 ..

Align seg 1/1 to: BE958470 from: 1 to: 523

1. MetylLeuAspThrProArgTrpArgGlyArg...SerTyHisAsPAR 16
:::||| ::::||| ::||| :||| :||| :||| :||| :||| :||| :||| :|||
118 CTTATAAGCCAACTTGCGAACTCTTCGCAAGCTCTGTTTCGGAG 167

16 glycSerLys...ValAspLeuAspArgLeuAsnAspAspAlaLysArgT 32
168 AAATCCAGTAGTGAGCTGACCTCTAAAGAGGGTAAAGAATAT 217

32 TyrSerCysThrProArgAsnTyrSerValAsnLeArgGluGluLeuLys 48
218 ACAGCTGCACACTCGTAACCTTCAGTGTCCATAAGGAAAGAACATAAG 267

49 LeuAlaAsnValPhaPheProArgGlySerLeuValGlnArgCysGL 65
268 AGAACCGTACCCATTTCGGCAAGGTCTGCTGGTTAACGCTGTGG 317

65 YGYIYashCysGlyCysGlyThrValAsnTrpArgSerCysthrCysAsnS 82
318 TGGAACTGTGCGTGNtGTCACAAATGCAATGAAATGTCATGTC 367

seq_name: gb_gss4_CNS04S8A

seq_documentation_block:

LOCUS CNS04S8A 1036 bp DNA GSS 24-MAY-2000

DEFINITION Tetraodon nigroviridis genome survey sequence PUC-Ori end of clone 007A01 of library H from Tetraodon nigroviridis, genomic survey sequence.

ACCESSION AL304867

VERSION AL304867.1 GI:81194524

KEYWORDS GSS; genome survey sequence.

SOURCE Tetraodon nigroviridis.

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percormorpha; Tetraodontiformes; Tetraodontidae; Tetraodon

REFERENCE 1 (bases 1 to 1036)

AUTHORS Roest-Crollius,H., Jaillon,O., Dasilva,C., Fizames,C., Fisher,C., Bouneau,L., Billault,A., Quetier,F., Saurin,W., Bernot,A. and Weissenbach,J.

TITLE Characterization and repeat analysis of the compact genome of the freshwater pufferfish Tetraodon nigroviridis

JOURNAL Unpublished 2 (bases 1 to 1036)

AUTHORS Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.

TITLE Human gene number estimation provided by genome wide analysis using Tetraodon nigroviridis DNA sequence

JOURNAL Unpublished 3 (bases 1 to 1036)

REFERENCE Genoscope.

AUTHORS Direct Submission 1..1036

JOURNAL Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases

COMMENT This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.

FEATURES source

1. organism="Tetraodon nigroviridis"
/db_xref="taxon:9883"
/clone="007A01"
/clone.lib="H"
/note="Genoscope sequence ID : COBH07AA01XEL-end : PUC-Ori"

BASE COUNT 272 a 190 c 236 g 337 t 1 others

ORIGIN

alignment_scores:

Quality:	291.00	Length:	74
Ratio:	4.217	Gaps:	1
Percent Similarity:	93.243	Percent Identity:	68.919

alignment_block:
US-09-662-783-4 x CNS04S8A.rev ..

Align seg 1/1 to reverse of: CNS04S8A from: 1 to: 1036

20 ValAspLeuAspArgLeuAsnAspAspAlaLysArgTyrSerCystThrPI 36
 406 GTTGATCTCAACGGTCCTCCATGATGAGTCAGGTACAGGTGCAACCCC 357
 36 oArgAsnTyrcSerValAsnIleArgGlugluLeuLysLeuIalaAsnValV 53
 356 CGGTAACTACTCGTAAATCTCCAAAAGAGTAAGGCCCAAAAGCTA 307
 53 alPhePheProArgCysLeuLeuValGlnArgCysGlyGlyAsnCysGly 69
 306 TTTCCTCCACGCTGTTGCCTGAAACGATGIGTGGCAACTGTGGA 257
 70 CysGlyLhrValAsnTyrArgSer.. CystThrCysAsnSerGlyLysThr 85
 256 TGTTGGACCAGCAACTGGAAATAACTGGCAACTGGCCCTGTCAGGCCAAATCA 207
 86 ValLysPstYryHisGluVal 92
 :::: ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 206 GCACTCAAACATGAGTAA 186

seq_name: qb_est98:BG243001

seq_documentation_block:

LOCUS	BG243001	910 bp	mRNA		EST	13-FEB-2001
DEFINITION	60235597 F1	NCTCGAP_Mam1	Mus musculus	CDNA clone	IMAGE:4483938	5'
	mRNA sequence.					
ACCESSION	BG243001					
VERSION	BG243001.1					
KEYWORDS	EST.					
SOURCE	house mouse.					
ORGANISM	Mus musculus					
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;						
Mammalia; Eutheria; Rodentia; Sciurogathini; Muridae; Murinae; Mus.						
REFERENCE	1 (bases 1 to 910)					
AUTHORS	NIH-MGc	http://mgc.nci.nih.gov/				
TITLE	National Institutes of Health, Mammalian Gene Collection (MGC)					
JOURNAL	Unpublished (1999)					
COMMENT	Contact: Robert Straussberg, Ph.D.					
	Email: cgsab@rmail.nih.gov					
	Tissue Procurement: Gilbert Smith, Ph.D.					
	CDNA Library Preparation: Life Technologies, Inc.					
	CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)					
	DNA Sequencing by: Incyte Genomics Inc.					
	Clone distribution: MGc clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:					
	http://image.llnl.gov					
	Plate: LLAM1023 row: d column: 19					
	High quality sequence stop: 690.					
FEATURES	Location/Qualifiers					
	1. .910					
	Organism="Mus musculus"					
	/strain="FVB/N"					
	/db_xref="taxon:10090"					
	/clone="IMAGE:4483938"					
	/clone_id="NCL_CGAP_Mam1"					
	/tissue-type="tumor, biopsy sample"					
	/dev_stage="3 months, virgin"					
	/lab_host="DH10B"					
	/note="Organ: mammal; Vector: pCMV-SPORT6; Site_1: SalI; site_2: NotI; Cloned unidirectionally. Primer: Oligo dt. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"					
BASE COUNT	242 a	220 c	250 g	198 t		
ORIGIN						
alignment_scores:						
Quality:	275.50				Length: 119	
Ratio:	2.900				Gaps: 3	
Percent Similarity:	79.832				Percent Identity: 51.261	
alignment_block:	US-09-662-783-4 x	BG243001				

); Double-stranded cDNA was prepared from cell line RNA, 5' and 3' adaptors were used in cloning as follows: 5' adaptor sequence: 5'-CACGGCATTAGGCC-3'; and 3' adaptor sequence: 5'-ATTCTAGAGGCCAGGGGCCACATG-dt(30)BN-3' (where B = A, C, or G and N = A, C, G, or T). Average insert size 1.5 kb (range 0.9-4.0 kb). 14/15 colonies contain inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC Library."

BASE COUNT	ORIGIN
234	a 169 c 238 g 210 t

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LNL at:
<http://image.llnl.gov>
Plate: LUCM497 row: h column: 01
High quality sequence stop: 415
Location/Qualifiers
1..950
Source: *Escherichia coli* "K-12 MG1655"

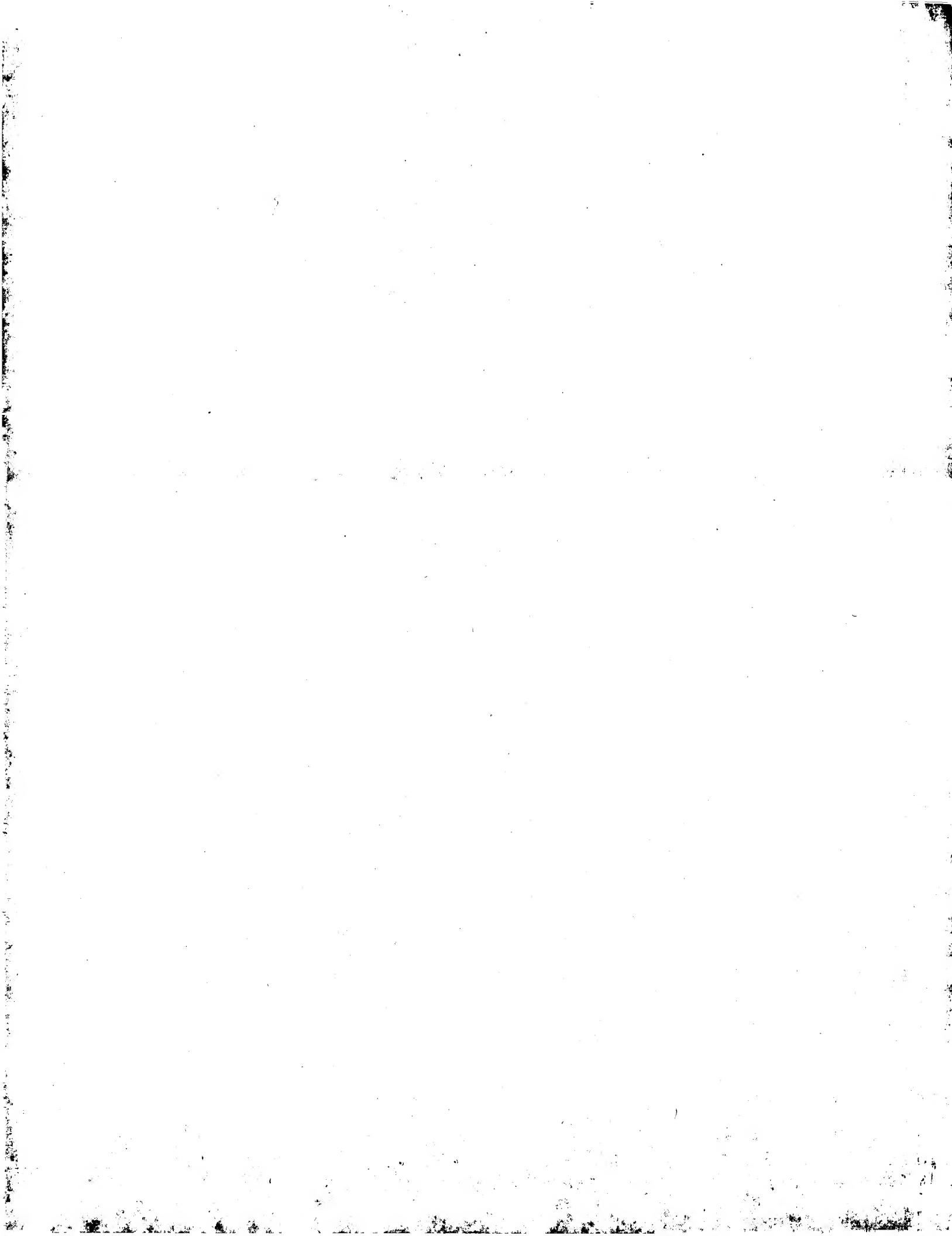
KEYWORDS EST.
house mouse.
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathia; Muridae; Murinae; Mus.
REFERENCE 1. (bases 1 to 447)
AUTHORS NCI-CGAP http://www.ncbi.nlm.nih.gov/ciccap.
TITLE Tumor Gene Index
JOURNAL Unpublished (1997)
COMMENT Contact: Robert Straussberg, Ph.D.
Email: cgaps@nlm.nih.gov
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo
, Ph.D.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
image.llnl.gov/image/html/lresources.shtml
MGI:1064727
Seq primer: -40RP from Gibco
High quality sequence stop: 4 02.
Location/Qualifiers 1..447
FEATURES source
/clone="IMAGE:3169267"
/clone_lib="Soares_NMEBA_branchial_arch"
/tissue_type="branchial arches"
/dev_stage="embryo, 10.5 dpc"
/lab_host="DH10B (pBR3D-Pac (Pharmacia) with a modified
vector: pRT3D-Pac (Pharmacia) with a modified
polylinker; Site_1. NotI; Site_2: EcoRI; 1st strand cDNA
TGTTTACCAATCTGAGTGGGGCGGCCGATGCCATTTCCTTTTTTTTTTTTT
3'; double-stranded cDNA was ligated to Eco RI adaptors
(Pharmacia), digested with Not I and cloned into the Not
I and Eco RI sites of the modified pRT3 vector. Library
constructed and normalized by Bento Soares and M.Fatima
Bonaldo."
BASE COUNT 126 a 104 c 108 g 109 t
ORIGIN

alignment_scores:
1 MetTyrLeuAspThrProArgTyrArgGlyArgSerTyr...HisAspAr 16
:::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
115 CTCATACAGCCAACATGCCAGCTTGGCAAGGCCTTCCGTATGGAA 164
16 glycSerLys...valAspLeuAspPargLeuasnaspAlaLysArgT 32
165 AAAAGCAAAGGGTGAATCTCCTAGGAGAGGTAAACTCT 214
Align seg 1/1 to: BF011835 from: 1 to: 447
1 MetTyrLeuAspThrProArgTyrArgGlyArgSerTyr...HisAspAr 16
:::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
115 CTCATACAGCCAACATGCCAGCTTGGCAAGGCCTTCCGTATGGAA 164
16 glycSerLys...valAspLeuAspPargLeuasnaspAlaLysArgT 32
165 AAAAGCAAAGGGTGAATCTCCTAGGAGAGGTAAACTCT 214
32 YSerCysThrProArgAsnYSerValAsnIleArgGluGluLeuLys 4 8
215 ACAGCAGCACACCCGAAACTCTAGTGTCAATCGGGAAAGGCTAAAG 264
49 LeuAlaAsnValV1PheProArgTyrArgGlyArgCysG1 55
:::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
265 AGCACAGATAACCATATCTGGCAGGTTGTCCTCTGGTCAGGCTGTGG 314
65 YIyAaSHCYSGLYCSslyThrValasnTrpArgSerCysThrCysAsns 82
||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||

315 AGGAATTGTCCTGTTGTCATTAATGCAATGAATGTCAGTGTGCC 364
82 erglyLySthrValLysLysLysTyrHsGluValLeuGlnPheGluPro 97
||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
365 CACGTAAGTACAAAAGTACCATGAGGTCCTCAGTGGAC 411
seq_name: gb_gss3:CNS024MX

seq_documentation_block:
LOCUS CNS024MX 877 bp DNA GSS 12-MAY-2000
DEFINITION Tetraodon nigroviridis genome survey sequence PUC-OrI end of clone
235A22 of library G from Tetraodon nigroviridis, genomic survey
sequence.
ALI80978 GI:7819035
VERSION ALI80978..1
KEYWORDS GSS; genome survey sequence.
SOURCE Tetraodon nigroviridis
ORGANISM Eukaryota; Metzoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Neoteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percormorpha; Tetraodontiformes;
Tetraodontidae; Tetraodon.
Unpublished 1 to 877
1 (bases 1 to 877)
Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C.,
Bonneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and
Weissenbach, J.
Characterization and repeat analysis of the compact genome of the
freshwater pufferfish Tetraodon nigroviridis
Unpublished 2 (bases 1 to 877)
Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C.,
Bonneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and
Weissenbach, J.
JOURNAL Unpublished 3 (bases 1 to 877)
REFERENCE Human gene number estimate provided by genome wide analysis using
DIRECT SUBMISSION 1. 877
COMMENT Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases.
This sequence is a single read and was generated as part of a large
scale clone-end sequencing project of the Tetraodon nigroviridis
genome. For more information, please take a look at
http://www.genoscope.cns.fr/Tetraodon.
FEATURES Location/Qualifiers
source 1. 877
/organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="35A22"
/clone_1.lib="G"
/note="Genoscope sequence ID : COAG235BA11SP1-end :
PUC-OrI"
JOURNAL
REFERENCE 1. 877
DIRECT SUBMISSION 1. 877
COMMENT Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases.
This sequence is a single read and was generated as part of a large
scale clone-end sequencing project of the Tetraodon nigroviridis
genome. For more information, please take a look at
http://www.genoscope.cns.fr/Tetraodon.
ORIGIN 1. 877
/organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="35A22"
/clone_1.lib="G"
/note="Genoscope sequence ID : COAG235BA11SP1-end :
PUC-OrI"
BASE COUNT 229 a 207 c 188 g 248 t 5 others
ORIGIN US-09-662-783-4 x CNS024MX/rev
alignment_scores:
Quality: 264.00 Length: 99
Ratio: 3.342 Gaps: 2
Percent Similarity: 79.798 Percent Identity: 51.515
alignment_block:
US-09-662-783-4 x CNS024MX/rev
Align seg 1/1 to reverse of: CNS024MX from: 1 to: 877
25 LeuAsnAspAspAlaLysArgTyrSerCysThrProArgAsnTyrSer 41
||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
651 CTGAGGGATGAGTGGCACTGACAGTGCACACCCGGCAACTCTCTGT 602
41 I ASN Ile Arg Glu Glu Leu Lys Leu Ala Asn Val Val Phe Phe Pro Arg C 58
||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
601 GTCTTGTGAGGAGCTGAGGAGCTGAGGAGCTAATTCCTGGCCAAGCT 552

TITLE Mouse BAC End Sequences from Library RPCI-23
JOURNAL Unpublished (1999)
COMMENT Contact: ShaoYing Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
TEL: 301 838 0200
FAX: 301 838 0208
Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-23. For BAC library availability, please contact Pieter de Jong



Result No.	Score	Query	Match	Length	DB ID	Description
1	100.5	13.6	148	1	VEGH_ORF7	P52585 orf virus {
2	95.5	13.0	188	1	VEGB_MOUSE	P49766 mus musculu
3	94	12.8	213	1	PDGA_RABBIT	P34007 oryctolagus
4	93	12.6	419	1	VEGC_HUMAN	P49167 homo sapien
5	92	12.5	415	1	VEGC_MOUSE	P97553 mus musculu
6	89	12.1	204	1	PDGA RAT	P28576 rattus norv
7	89	12.1	211	1	PDGA_HUMAN	P041985 homo sapien
8	89	12.1	211	1	PDGA_MOUSE	P20033 mus musculu
9	85.5	11.6	188	1	VEGB_HUMAN	P49765 homo sapien
10	84.5	11.5	133	1	VEGH_ORF2	P52584 orf virus {
11	83	11.3	226	1	PDGA_XENLA	P13698 xenopus lae
12	81	11.0	241	1	PDGB_SHEEP	P52589 ovis aries
13	80	10.9	164	1	VEGF_CAVPO	P26617 cavia porce
14	79	10.7	241	1	PDGB_MOUSE	P31240 mus musculu
15	78	10.6	225	1	PDGB RAT	P05038 rattus norv
16	77	10.4	77	1	MT2_VICFA	Q41657 vicia faba
17	77	10.4	79	1	MT2_CICAR	P39459 cicter ariet
18	77	10.4	146	1	VEGF_BOVIN	P50412 ovis aries
19	77	10.4	190	1	VEGF_BOVIN	P15591 bos taurus
20	77	10.4	245	1	PDGB_FELCA	P12919 felis silve
21	76.5	10.4	1790	1	LMBL_DROME	P101046 drosophila
22	76	10.3	241	1	PDGB_HUMAN	P01127 homo sapien
23	74	10.0	77	1	MT1A_VICFA	Q41669 vicia faba
24	74	10.0	82	1	MT2B_LYCES	P04158 lycopersicu
25	74	10.0	215	1	VEGF_HUMAN	P15592 homo sapien
26	73.5	10.0	82	1	MT2L_ORYSA	P94039 oryza sativ
27	73.5	10.0	158	1	PLGF MOUSE	P49764 mus musculu
28	73	9.9	78	1	MT2_ACTCH	P43330 actinidia c
29	73	9.9	79	1	MT2_MALDO	P24058 malus domes
30	73	9.9	170	1	PLGF_HUMAN	P49763 homo sapien
31	72	9.8	80	1	MT2_RICCO	P30564 ricinus com
32	71	9.6	77	1	MTA_PRIRP	P43398 trifolium r
33	71	9.6	78	1	MT2_MUSAC	P22319 musa acumin

Copyright (c) 1993 - 2000 Compugen Ltd.
 OM protein - protein search, using sw model
 Run on: September 26, 2001, 15:15:09 ; Search time 11.6 Seconds
 (without alignments)
 389.804 Million cell updates/sec
 Title: US-09-662-783-4
 Perfect score: 737
 Sequence: 1 MYLDTPRYGRGRSYHDRSKV.....DQLDHHERCDCICSSRPR 132

ALIGNMENTS

RESULT 1
 VEGH_ORF7 STANDARD; PPT; 148 AA.

ID VEGH_ORF7
 AC P52585;

DT 01-OCT-1996 (Rel. 34, Created)

DT 01-OCT-1998 (Rel. 34, Last sequence update)

DT 15-JUL-1999 (Rel. 38, Last annotation update)

DE VASCULAR ENDOTHELIAL GROWTH FACTOR HOMOLOG PRECURSOR

A2R.

OS Orf virus (strain NZ7) (OV NZ-7)

OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;

OC Parapoxvirus;

OX NCBI_TaxID=73495;

RN [1]

RP SEQUENCE FROM N.A. MEDLINE=94076465; PubMed=8254780;

RA "Homologs of vascular endothelial growth factor are encoded by the

RT poxvirus orf virus.";

RL J. Virol. 68: 84-92(1994).

CC -1 SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).

CC -1 FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.

CC -1 SIMILARITY: BELONGS TO THE PGF/VEGF FAMILY OF GROWTH FACTORS.

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CC DR EMBL: S67522; AAB9223; 1; -
 DR HSSP: P15692; IVPF.
 DR InterPro: IPRO00072; -
 DR Pfam: PF00341; PDGF; 1.
 DR PROSITE: PS00249; PDGF_1; FALSE_NEG.
 DR PROSITE: PS50278; PDGF_2; 1.
 KW Mitogen; Growth factor; Glycoprotein; Signal.

CC FT SIGNAL 1 ?
 DR VASCULAR ENDOTHELIAL GROWTH FACTOR
 DR HOMOLOG.
 FT DISULFID 46 88 BY SIMILARITY.
 FT DISULFID 77 130 BY SIMILARITY.
 FT DISULFID 81 132 BY SIMILARITY.
 FT DISULFID 71 71 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 80 80 INTERCHAIN (BY SIMILARITY).
 FT CARBOHYD 95 95 N-LINKED (GLCNAC). (POTENTIAL).
 SQ SEQUENCE 148 AA; F0E13BA104CC73F8 CRC64;

Query Match Score 100.5; DB 1; Length 148;

Best Local Similarity 25.6%; Pred. No. 0.00082;

Matches 32; Conservative 13; Mismatches 31; Indels 49; Gaps 5;

QY 34 CTPRNYSNTREEL-KLANYVFPRCLLYQRGGNCG-----CGTVNNRNSCT-----79

Db	46	CKPRDITVVYGEYPESTNLIQYNPRCVTVKRCGCGNGDQICATAVETRNTTVSVTGV	105	Query Match Score 95.5; DB 1; Length 188;
Qy	80	-----CNSGKTVKKTHEVLFQEPFGHIKRRGRAKTVALVDIQLDHHERCDI-----CS	127	Best Local Similarity 27.9%; Pred. No. 0.035; Mismatches 38; Indels 21; Gaps 5;
Db	106	SSSGNTNGSTN-----LQRISVTENTKDCDTGRTTTPTP	142	Matches 29; Conservative 16;
Qy	128	SRPPR	132	Qy 31 RYSCTPRNYSVNIREELKLANVV--FFPRCLVQRCGGNGCGTVNWRSCTCNSGKTVKK 88
Db	143	TREPR	147	Db 44 RATCOPREVVPPLSMEIL-MGNVVKOLVPSCTVQRG--~-GCCPDGLCEVPTGOVQRM 99
RESULT 2				
ID	VEGB_MOUSE	STANDARD;	PRT;	188 AA.
AC	P49766;	3	PDGA_RABIT	SEQUENCE FROM N.A.
DT	01-OCT-1996	(Rel. 34, Created)	ID	PDGA_RABIT
DT	01-OCT-1996	(Rel. 34, Last sequence update)	AC	P34007;
DT	15-DEC-1998	(Rel. 37, Last annotation update)	DT	01-FEB-1994 (Rel. 28, Created)
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (VEGF-B) (VASCULAR ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRF).	DT	01-FEB-1994 (Rel. 28, Last sequence update)	
GN	VEGB OR VRF.	DT	01-OCT-2000 (Rel. 40, Last annotation update)	
OS	Mus musculus (Mouse).	DT	DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN) (PDGF-1).	
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.	DE	DE PDGF-1.	
OC	Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.	DE	DE PDGF-1.	
OX	NCBI_TaxID-10090;	GN	OS Oryctolagus cuniculus (Rabbit); Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.	
RN	[1]	OC	OC Mammalia; Eutheria; Lagomorpha; Oryctolagus.	
RP	SEQUENCE FROM N.A.	OX	OX NCBI_TaxID-9986;	
RC	TISSUE=Heart;	RN	RN [1]	
RX	Medline=96197355; PubMed=8637916;	RP	RP SEQUENCE FROM N.A.	
RA	Olofsson B., Pajusola K., Kaijainen A., von Euler G., Joukov V., Saksela O., Orpana A., Pettersson R.F., Alitalo K., Eriksson U.; "Vascular endothelial growth factor B, a novel growth factor for endothelial cells"; Proc. Natl. Acad. Sci. U.S.A. 93:2576-2581(1996).	RC	RC TISSUE=Vascular smooth muscle;	
RA	RT	RX Medline=92446970; PubMed=1575749;		
RA	RT	RA Nakahara K.-I., Nishimura H., Kurao O M., Takekaki S.-I., Iwase M., Ohkubo A., Yazaki Y., Nagai R.; "Identification of three types of PDGF-A chain gene transcripts in rabbit vascular smooth muscle and their regulated expression during development and by angiogenesis II"; J. Biochem. Biophys. Res. Commun. 184: 811-818 (1992).		
RL	RL	CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICTS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.		
RL	RL	CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.		
RN	SEQUENCE FROM N.A.	CC -1- ALTERNATIVE PRODUCTS: 3 ISOFORMS; A1, A2 (SHOWN HERE) AND A3; ARE PRODUCED BY ALTERNATIVE SPlicing.		
RP	SEQUENCE=Brain;	CC -1- INDUCTION: THE FORM A3 IS SELECTIVELY INDUCED BY ANGIOTENSIN II.		
RX	Medline=96183052; PubMed=8607868;	CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.		
RA	Townson S., Lagercrantz J., Grimmund S., Silins G., Nordenskjold M., Weber G., Hayward N.K.; "Characterization of the murine VEGF-related factor gene.";	CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.		
RA	RT	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).		
RL	RL	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).		
CC	-1- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN.	CC	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).	
CC	-1- TISSUE SPECIFICITY: ABUNDANTLY EXPRESSED IN HEART, BRAIN, KIDNEY AND SKELETAL MUSCLE.	CC	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).	
CC	-1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.	CC	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).	
CC	CC	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).		
DR	AAB06273; AAC52553.1; -.	CC	CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).	
DR	HSSP; P15682; 2VGH.	DR	DR PIR: IPR000072; -.	
DR	InterPro: IPR000072; -.	DR	DR Pfam: PF00341; PDGF; 1.	
DR	Pfam: PF00249; PDGF_1.	DR	DR PROSITE: PS00249; PDGF_1.	
DR	PROSITE: PS50278; PDGF_2.	DR	DR PROSITE: PS00249; PDGF_1.	
KW	Mitogen, Growth factor; Signal; Heparin-binding.	FT	FT DISULFID FT DISULFID 1331 179	
FT	1	FT	FT DISULFID 1335 181	
FT	21	FT	FT DISULFID 125 125	
FT	188	FT	FT DISULFID 134 134	
FT	VASCULAR ENDOTHELIAL GROWTH FACTOR B.	FT	FT CARBOHYD 136 136	
SEQUENCE	188 AA;	FT	N-LINKED (GLCNAC. . .) (POTENTIAL).	
SQ	D52A05FB995E9CA CRC64;	FT		

FT VARSPLIC 196 198 GRR -> DVR (IN ISOFORM A1).
 FT VARSPLIC 199 213 MISSING (IN ISOFORM A1).
 FT VARSPLIC 197 213 RRRESGKKEKKRERKPT -> TULPAPGGVHPOGLRAHDG
 CQSENHNHALGNIKKM (IN ISOFORM A3).
 SQ SEQUENCE 213 AA: 24005 MW: 28A9B7E50487F4C5 CRC64;

Query Match 12.8%; Score 94; DB 1; Length 213;
 Best Local Similarity 28.0%; Pred. No. 0.0058;
 Matches 23; Conservative 17; Mismatches 32; Indels 10; Gaps 3;

Qy 50 ANVVFPRCLLVQRCGGNGCCTNWRSCTCNSGKTVKYHEYLQFEPGHIKRRGAKTM 109
 Db 117 ANFLIWPPCVEVKRCTGCC ---NTSSYKCPQRSHRSVHKAVKE -YVRKKPKLKE- 168

Qy 110 ALVDTQDLDIHERUDCICSSRPP 131
 Db 169 - -VOYRLLEEECAASSAGP 188

RESULT 4
 VEGC_HUMAN STANDARD; PRT; 419 AA.
 AC P49767;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 01-OCT-2000 (Rel. 40, Last annotation update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSOR (VEGF-C) (VASCULAR
 DE ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRP) (FLT4 LIGAND) (FLT4 -
 DE L).
 GN VEGFC
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Buteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OC NCBI_TAXID=9606;
 RN [1] SEQUENCE FROM N.A., AND SEQUENCE OF 103-120.
 RP MEDLINE=96178224; PubMed=8617204;
 RA Joukova V., Pajusola K., Kaihainen N., Alitalo K.;
 RA Sakselä O., Kalkkinen N., Alitalo K.;
 RA "A novel vascular endothelial growth factor, VEGF-C, is a ligand for
 RT the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases .",
 RL EMBO J. 15:290-298(1996).
 RN [2]
 RP ERRATUM.
 RX MEDLINE=96203034; PubMed=8612600;
 RA Joukova V., Pajusola K., Kaihainen N., Alitalo K.;
 RA Sakselä O., Kalkkinen N., Alitalo K.;
 RL EMBO J. 15:1751-1751(1996).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=96312526; PubMed=8700872;
 RA Lee J., Gray A., Yuan J., Luoh S.-M., Avraham H., Wood W.I.;
 RT "vascular endothelial growth factor-related protein: a ligand and
 RT specific activator of the tyrosine kinase receptor Flt4.";
 RL Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
 RN [4]
 RP SEQUENCE FROM N.A.
 RA Fitz L., Morris J.C., Towler P.S., Long A.J., Greco R.,
 RT "vascular endothelial growth factor-related protein: a ligand and
 RT specific activator of the tyrosine kinase receptor Flt4.";
 RL Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
 RN [5]
 RP Submitted (JUN-1996) to the EMBL/GenBank/DDJB databases.
 CC -!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
 CC CELL GROWTH.
 CC -!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
 CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

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CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC

CC

DR EMBL: X94216; CAA63907; 1;
 DR EMBL: U41142; AAA85214; 1;
 DR EMBL: U58111; AAB02909; 1;
 DR HSSP: P15692; 1VPF.
 DR MIM: 601528;
 DR InterPro: IPR000072; -;
 DR InterPro: IPR002400; -;
 DR Pfam: PF00341; PDGF; 1;
 DR PRINTS: PRO038; GFCYSKNOT;
 DR PROSITE: PS00249; PDGF; 1;
 DR PROSITE: PS50278; PDGF_2; 1;
 DR KW Mitogen; Growth factor; Glycoprotein; Signal; Repeat.
 DR FT SIGNAL 1 ?
 DR FT PROPEP ?
 DR FT CHAIN 103 419
 DR FT DOMAIN 275 365
 DR FT REPEAT 275 298
 DR FT REPEAT 299 322
 DR FT REPEAT 323 346
 DR FT REPEAT 347 365
 DR FT CARBOHYD 175 175
 DR FT CARBOHYD 205 205
 DR FT CARBOHYD 240 240
 DR SQ SEQUENCE 419 AA: 46883 MW: 91598719DB3E014F CRC64;

Query Match 12.6%; Score 93; DB 1; Length 419;
 Best Local Similarity 20.7%; Pred. No. 0.015;
 Matches 38; Conservative 20; Mismatches 50; Indels 76; Gaps 8;

Qy 22 LDRLNDDAKRYSCITPRNYSVNIREELKANVFF-PRCLLIVQRGCGNCG----- 69
 Db 119 LKSIDNEWRKTKTQCMPREVICDVGKEFGVATNTFFKPPCVSYRQGCCNSEGLQCMNTST 178
 Qy 70 -----CGTVNWFSCTCMGSKTY-KKYTHEVLQ----- 94
 Db 179 SYLSKRTLFETTVPLQSQGPKPVTISFANITSQRCKMSKLQYRHSITSLPLTPQCGA 238
 Qy 95 -----FEPGHKR----- RGRKTMALVDI----OLDHHHERCDCICSS 128
 Db 239 ANKTCPTNYMWNNTICRCLQAQDFMFSSDAGDDSTDGFDICGPNKELD-EETCQCVCRA 297
 Qy 129 --RP 130
 Db 298 GLRP 301

RESULT 5
 VEGC_MOUSE STANDARD; PRT; 415 AA.
 ID VEGC_MOUSE
 AC P97553;
 DT 15-JUL-1998 (Rel. 36, Created)
 DT 15-JUL-1998 (Rel. 36, Last sequence update)
 DT 30-MAY-2000 (Rel. 39, Last annotation update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSOR (VEGF-C) (FLT4 LIGAND)
 DE (FLT4-L).
 GN VEGFC.
 OS Mus musculus (Mouse).
 OC Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Muridae; Murinae; Mus.
 OC NCBL_TAXID=10090;
 RC STRAIN=BALB/C;
 RC MEDLINE=97164677; PubMed=9012504;
 RA Kukk E., Lymbosuksa A., Taira S., Kaipainen A., Jeltsch M.,
 RA Joukov V., Alitalo K.,
 RA "VEGF-C receptor binding and pattern of expression with VEGFR-3

RT suggests a role in lymphatic vascular development.";
 RL Development 122:3829-3837(1996).
 RN [2] SEQUENCE FROM N.A.
 RP STRAIN=BALB/C;
 RX MEDLINE=97388482;
 RA Fitz L.J., Morris J.C., Towler P., Long A., Burgess P., Greco R., Wang J., Gassaway R., Nickbarg E., Kovacic S., Ciarletta A., Giannotti J., Finney H., Zollner R., Beier D.R., Leak L.V., Turner K.J., Wood C.R.;
 RA Characterization of murine Flt4 ligand/VEGF-C.; Oncogene 15:613-618(1997).
 CC -1- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL CELL GROWTH.
 CC -1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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 CC
 DR EMBL; U73640; ANC52984.1;
 DR PR0438; AAC8112; AAB46707.1; -;
 DR HSSP; P15692; 1VPF.
 DR MGI; MGI:109124; Vegfc.
 DR Interpro; IPR000742; -;
 DR Interpro; IPR002400; -;
 DR PFAM; PF03341; PDGF; 1.
 DR PRINTS; PRO0438; GFYSKNOT.
 DR PROSITE; PS00249; PDGF_1.
 DR PROSITE; PS50278; PDGF_2; 1.
 RW Mitogen; Growth factor; Glycoprotein; Signal; Repeat.
 FT SIGNAL; Growth factor?
 FT PROPEP? 1 98
 FT CHAIN 99 415
 FT DOMAIN 271 361
 FT REPEAT 271 294
 FT REPEAT 295 318
 FT REPEAT 319 342
 FT REPEAT 343 361
 FT CARBOHYD 171 171
 FT CARBOHYD 201 201
 FT CARBOHYD 236 236
 SQ SEQUENCE 415 AA; 46471 MW; D9D3DD3CECC659D6 CRC64;

Query Match 12.5%; Score 92; DB 1; Length 415;
 Best Local Similarity 24.3%; Pred. No. 0.019; Gaps 4;
 Matches 27; Conservative 18; Mismatches 42; Indels 24;
 Qy 22 LDRNLDAKRYSTPPRNYSVNEELRFLYPRCLLVYPRNLYVNNRSCTC 80
 Db 115 LKSIDNEWRKRTQMPREVCIDVGKEFGAAATNTFFKPCPVSYVRGCC - - - -NSEGLQC 169
 Qy 81 NSGKTVKKYHEVLQFEPGHKRGRAKTM-----VDIOLDHHERCDCI 125
 Db 170 MNTST-----GYLSKTLFEITVPLSQGPKPVTISFAHNTSCRCM 208

RESULT 6
 PEGA_RAT ID PDGA_RAT STANDARD PRT; 204 AA.
 AC :|: ;|: ;|: ;|: ;|: ;|:
 DR 01-DEC-1992 (Rel. 24, Created)
 DR 01-FEB-1994 (Rel. 28, Last sequence update)
 DR 01-OCT-2000 (Rel. 40, Last annotation update)
 DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
 DE (PDGF-'1').
 GN PGFPA OR RPAl.

OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OC NCBI_TAXID=10116;
 RN [1] SEQUENCE OF 8-204 FROM N.A.
 RX MEDLINE=9305723; PubMed=8318539;
 RA Weyer K.A., Rouge M., Loscher P., Pech M.;
 RA "Conservation in sequence and affinity of human and rodent PDGF RT ligands and receptors.";
 RL Biochim. Biophys. Acta 1173:294-302(1993).
 RN [2] SEQUENCE FROM N.A.
 RP MEDLINE=93191115; PubMed=8447423;
 RX RA Katayose D., Ohe M., Yamauchi K., Ogata M., Shirato K., Fujita H., Shiba S., Takishima T.;
 RT RT Increased expression of PDGF A- and B-chain genes in rat lungs with hypoxic pulmonary hypertension";
 RL Am. J. Physiol. 264:L100-L106(1993).
 RN [3] SEQUENCE FROM N.A. (SHORT FORM).
 RP Xia Y., Feng L., Tang W.W., Wilson C.B.; Cloning and expression of rat platelet-derived growth factor A-chain.";
 RL J. Am. Soc. Nephrol. 3:622-622(1992).
 RN [4] SEQUENCE OF 58-196 FROM N.A. (SHORT FORM).
 RP STRAIN=FISCHER 344; TISSUE=Smooth muscle;
 RC MEDLINE=93225589; PubMed=8469035;
 RX RA Szabo P., Weksler D., Whittington B., Weksler B.B.; "The age-dependent proliferation of rat aortic smooth muscle cells is independent of differential splicing of PDGF A-chain mRNA.";
 RL Mech. Ageing Dev. 67:79-89(1993).
 CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICTS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC -1- SUBUNIT: ANTI-PARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
 CC -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A SHORT FORM; ARE PRODUCED BY ALTERNATIVE SPlicing. THE LONG FORM CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL, RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC -1- DEVELOPMENTAL STAGE: IN KIDNEY EPITHELIAL TISSUES, THE SHORTER FORM PREDOMINATES IN YOUNG (1 DAY OLD) RATS WHILE THE LONGER FORM BECOMES MORE PREVALANT DURING AGING.
 CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.
 CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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 CC DR EMBL; L06894; AAB59693.1;
 DR EMBL; L06894; AAB26134.2;
 DR HSSP; P01127; 1PDG.
 DR InterPro; IPR000072;
 DR InterPro; IPR002400;
 DR Pfam; PF00341; PDGF; 1.
 DR Prints; PRO0438; GFCYSKNOT.
 DR PROSITE; PS00219; PDGF_1.
 DR PROSITE; PS50278; PDGF_2; 1.
 KW Glycoprotein; Mitogen; Growth factor; Platelet; Glycoprotein; Mitogen; Growth signal; KW Signal.

FT	SIGNAL	1	20	BY SIMILARITY.
FT	PROPEP	21	85	REMOVED BY PROTEOLYSIS
FT	CHAIN	86	204	PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
FT	SITE	158	162	RECEPTOR BINDING SITE (POTENTIAL).
FT	DISULFID	96	140	BY SIMILARITY.
FT	DISULFID	129	177	BY SIMILARITY.
FT	DISULFID	133	179	BY SIMILARITY.
FT	DISULFID	123	123	INTERCHAIN (BY SIMILARITY).
FT	DISULFID	132	132	INTERCHAIN (BY SIMILARITY).
FT	CARBONYD	134	134	N-LINKED (GLCNAC . . .) (BY SIMILARITY).
FT	VARSPLIC	194	196	GRR -> DVR (IN SHORT ISOFORM).
FT	VARSPLIC	197	204	MISSED (IN SHORT ISOFORM).
FT	CONFLICT	85	111	KRSIEEAIPAVKTRTYEIPPSQVD -> REVLRKPFQ
FT	CONFLICT	119	119	FARPGRSFTRYLIGARWT (IN REF. 2).
FT	SEQUENCE	204	AA;	T -> T (IN REF. 3).
SQ		23307	MW;	FA413F74E86F742C CRC64;
Query	Match	12.1%	Score 89;	DB 1; Length 204;
Best	Local Similarity	26.8%	Pred. No. 0.019;	
Matches	Conservative	18;	Mismatches 32;	Indels 10; Gaps
QY	50	ANVVFFPRCLIVQRGGNGCGGTNVNWRSCNTNSGKTVKKHYEVLOFEPGHIKRGRAKTM 109		
Db	115	ANFLIQDHHHERCQLCTSSRPP 131		
QY	110	ALVQIQLDHHHERCQLCTSSRPP 131		
Db	167	-VQVRLLEELACATSNLRP 186		

RESULT	7
PDGA_HUMAN	
PDGA_HUMAN	STANDARD;
AC	P04085;
DT	01-NOV-1986 (Rel. 03, Created)
DT	01-NOV-1986 (Rel. 03, Last sequence update)
DT	01-OCT-2000 (Rel. 40, Last annotation update)
DE	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN) (PDGF-1).
DE	(PDGF-1).
GN	PDGFA
OS	Homo sapiens (Human).
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX	NCBI_Taxid:9606;
RN	[1]
RP	SEQUENCE FROM N.A.
RX	MEDLINE=88144463; PubMed=3422746;
RA	Bonthron D.T., Morton C.C., Orkin S.H., Collins T.;
RT	"Platelet-derived growth factor A chain: gene structure, chromosomal location, and basis for alternative mRNA splicing."

RN	SEQUENCE FROM N.A.
RP	SEQUENCE FROM N.A.
RX	MEDLINE=88174698; PubMed=2832727;
RA	Rorsman F., Bywater M., Knott T.J., Scott J., Betsholtz C.;
RT	"structural characterization of the human platelet-derived growth
RT	factor A-chain cDNA and gene; alternative exon usage predicts two
RT	different precursor proteins."
RL	Mol. Cell. Biol. 8:571-577(1988).
[3]	
RN	SEQUENCE FROM N.A.
RP	MEDLINE=86203630; PubMed=3754619;
RX	Betsholtz C., Johnson A., Heldin C.H., Westermark B., Lind P., Urdea M.S., Eddy R., Shows T.B., Philpott K., Mellor A.L., Knott T.J., Scott J.;
RA	"cDNA sequence and chromosomal localization of human platelet-derived
RT	growth factor A-chain and its expression in tumour cell lines".

RN 14] RP SEQUENCE FROM N.A.
MEDLINE-88030061; PubMed=3666150;
RX Horne, J.; Schumacher, L.; Fischer, W.; Weich, U.A.

"The long 3'-untranslated regions of the PDGF-A and -B mRNAs are only distantly related."
 FEBS Lett. 223:243-246(1987).

[5] SEQUENCE OF 1-53 FROM N.A., MEDLINE=932628, PubMed=8486531; Takimoto Y., Li W.Y., Wang Z.Y., Tong B.D., Deuel T.F.; "Nucleotide sequence of the 5' region of the human platelet-derived growth factor A chain gene"; Hiroshima J. Med. Sci. 42:47-52(1993).

[6] ALTERNATIVE SPLICING, MEDLINE=87287247; PubMed=3614363; Tong B.D., Auer D.E., Jaye M., Kaplow J.M., Ricca G., McConathy E., Drihan W., Deuel T.F.; "Alternative RNA splicing affects function of encoded platelet-derived growth factor A chain"; Nature 328:619-621(1987).

[7] ALTERNATIVE SPLICING, MEDLINE=87287248; PubMed=3614364; Collins T., Bonthron D.T., Orkin S.H.; "Alternative RNA splicing reveals differences between human glial and endothelial cell platelet-derived growth factor A-chains"; Nature 328:621-624(1987).

[8] INTERCHAIN DISULFIDE BONDS, MEDLINE=92283833; PubMed=317862; Andersson M., Oestman A., Baekstroem G., Hellman U., George-Nascimento C., Westermark B., Heldin C.-H.; "Assignment of interchain disulfide bonds in platelet-derived growth factor (PDGF) and evidence for agonist activity of monomeric PDGF"; J. Biol. Chem. 267:11260-11265(1992).

-!- FUNCTION: PLATELET-DEIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICTS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.

-!- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.

-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A SHORT FORM; ARE PRODUCED BY ALTERNATIVE SPlicing. THE LONG FORM CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.

-!- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.

-!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

-!- DATABASE: NAME=RDS Systems; cytokine source book;
[WWW="http://www.rdsystems.com/cyt_cat/pdgf.html"](http://www.rdsystems.com/cyt_cat/pdgf.html).

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EMBL; X21571; ; NOT_ANNOTATED_CDS.
 EMBL; X03795; CAA27421; ; .
 EMBL; X06374; CAA29677; ; .
 EMBL; M20494; AAA60045; ; .
 EMBL; M20488; AAA60045; ; JOINED.
 EMBL; M20489; AAA60045; ; JOINED.
 EMBL; M20490; AAA60045; ; JOINED.
 EMBL; M20491; AAA60045; ; JOINED.
 EMBL; M20492; AAA60045; ; JOINED.
 EMBL; M20493; AAA60045; ; JOINED.
 EMBL; M19988; AAA60046; ; .
 EMBL; M21571; AAA60046; ; JOINED.
 EMBL; M19984; AAA60046; ; JOINED.
 EMBL; M19985; AAA60046; ; JOINED.
 EMBL; M19986; AAA60046; ; JOINED.

Qy 25 LNDDA-----KRYSTPPNNSVNIKE-LKLKANVVFPRLCLLYQRCGNGCGTVN 74
 DR ||| : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
 DB 18 LNADSNTKGWSVLYKSECKPPIVPPVSEFHPELTSQRFNPVCYLMRGCC----N 72
 DR PROSITE; PS00249; PDGF 1; 1.
 DR PRINTS; PR00438; GFCYSRKNOT.
 KW Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing;
 KW Signal.

Qy 75 WRSCCTCNSGKTVKYHEVLQFEPGHIKRGRAKTMAVDIQLDHHERCDC----IC 126
 DR 73 DESLCVPTTEEVNSMELL-----GASGSNSGMRQLSFEVKKCDRCRFFTTTPPT 124
 DR FT PROPEP 1 22
 DR FT PROPEP 23 91 REMOVED BY PROTEOLYSIS.
 DR FT CHAIN 92 226 PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
 DR FT DISULFID 101 145 BY SIMILARITY.
 DR FT DISULFID 134 182 BY SIMILARITY.
 DR FT DISULFID 138 184 BY SIMILARITY.
 DR FT DISULFID 128 128 INTERCHAIN (BY SIMILARITY).
 DR FT DISULFID 137 137 INTERCHAIN (BY SIMILARITY).
 DR FT CARBOHYD 139 139 N-LINKED (GLCNAC, -) (PROBABLE).
 DR FT VARSPLIC 198 200 GPF -> DVR (IN SHORT ISOFORM).
 DR FT VARSPLIC 201 226 MISSING (IN SHORT ISOFORM).
 DR FT CONFLICT 199 209 MISSING (IN REF. 2).
 DR SQ SEQUENCE 218 218 Q -> R (IN REF. 2).
 DR SQ SEQUENCE 226 AA; 25719 MW; E3E724FCFC67C2FB2 CRC64;

Query Match 11.3%; Score 83; DB 1; Length 226;
 Best Local Similarity 26.6%; Pred. No. 0.09;
 Matches 21; Conservative 18; Mismatches 30; Indels 10; Gaps 3;

Qy 50 ANVVFEPCLIVORCGSGNCNGGTVNWRSTCTNSGKTVKYHEVLQFEPGHIKRGRAKTM 109
 DR ||| : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : |
 DR Db 120 ANFLIWPCVEVKRNGC-----NTSSVKCOPSRTHRSVKAKE-YVRKKPKLKE- 171

Qy 110 ALVDIQLDHHERCDC1CS 128
 DR Db 172 --VVLVLEHLECTCTANS 188

RESULT 12
 PDGB_SHEEP STANDARD; PRT; 241 AA.
 ID PDGB_SHEEP
 AC 095229;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 01-NOV-1997 (Rel. 35, Last sequence update)
 DT 01-NOV-1997 (Rel. 35, Last annotation update)
 DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
 DE (PDGFA)
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae; Pipidae;
 OC Xenopoda; Xenopus.
 OX NCBI_TAXID=8355;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Oocyte;
 RX MEDLINE=88331676; PubMed=3413486;
 RA Mercola M., Melton D.A., Stiles C.D.;
 RA "Platelet-derived growth factor A chain is maternally encoded in
 RR Xenopus embryos."
 RL Science 241:1223-1225(1988).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Oocyte;
 RX MEDLINE=90175016; PubMed=2308861;
 RA Bejcek B.-E., Li D. Y., Deuel T. F.;
 RA "Nucleotide sequence of a cDNA clone of Xenopus platelet-derived
 growth factor A-chain."
 RL Nucleic Acids Res. 18: 680-680(1990).
 DR FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
 CELLS OF MESCHIMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
 AFFINITY RECEPTOR ELICTS A VARIETY OF CELLULAR RESPONSES. IT IS
 RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
 IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC - SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
 AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
 CC TRANSFORMATION PROCESSES.
 CC - ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A
 CC SHORT FORM; ARE PRODUCED BY ALTERNATIVE SPLICING. THE LONG FORM
 CC CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.
 CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC PDPF RECEPTOR.
 CC - SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

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CC EMBL; M23237; AAA49927; 1;
 DR EMBL; M23238; AAA49928; 1;
 DR EMBL; X17545; CAH35563; 1;
 DR PIR; S08220; S08220;
 DR HSSP; P01127; 1PDG.
 DR InterPro; IPR000072; -.

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CC or send an email to license@isb-sib.ch).

CC
 CC
 DR EMBL: M844013; AAA37057.1; -
 DR HSSP; P15692; 2VGH.
 DR InterPro; IPR000072; -
 DR InterPro; IPR000400; -
 DR Pfam; PF00341; PDGF_1.
 DR PRINTS; PRO0438; GFCYSKNOT.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 KW Mitogen: Growth factor; Proto-oncogene; Platelet; Signal.
 FT SIGNAL 1 20 BY SIMILARITY.
 FT PROPEP 21 81 BY SIMILARITY.
 FT CHAIN 82 190 PLATELET-DERIVED GROWTH FACTOR, B CHAIN.
 FT PROPEP 191 241 BY SIMILARITY.
 FT SITE 108 108 INVOLVED IN RECEPTOR BINDING.
 FT SITE 111 111 INVOLVED IN RECEPTOR BINDING.
 FT DISULFID 97 141 BY SIMILARITY.
 FT DISULFID 130 178 BY SIMILARITY.
 FT DISULFID 134 180 BY SIMILARITY.
 FT DISULFID 124 124 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 133 133 INTERCHAIN (BY SIMILARITY).
 FT CARBOYD 63 63 N-LINKED (GLCNAC. . .) (POTENTIAL).
 SQ SEQUENCE 241 AA; 27331 MW; 37BB1EC12E7D2863 CRC64;

Query Match 11.0%; Score 81; DB 1; Length 241;
 Best Local Similarity 30.7%; Pred. No. 0.16; Mismatches 11; Indels 10; Gaps 2;

CC
 CC
 DR QY 50 ANVVFPPRCLVQRGGNCGGTWNWRSCTCNSGKTVKKYHEVLQFEPGHIKRRGAKTM 109
 DR 116 ANFLYWPCCVYQRCRSGCC --- NRNRYQCRPTQYQDRKVQVKRIETVRKKLFKKATV 170
 DR QY 110 ALVTDIOLDHHERCDC 124
 DR 171 TLVD---HLCRC 180

RESULT 13
 VEGF_CAVPO STANDARD PRT; 164 AA.
 AC P26617; DT 01-AUG-1992 (Rel. 23, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VPF).
 GN VEGF.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Muridae; Murinae; Mus.
 RN [1]
 RA Sequence from N.A.
 RA Berse, B.; RL (XXX-1992) to the EMBL/GenBank/DBJ databases.
 CC NCBI_TAXID=10141;
 RN RPLINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
 CC -!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
 CC -!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

CC
 CC
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CC
 CC
 DR EMBL: M84453; AAA40113.1; -

DR	EMBL; M84448; AAA40113_1; JOINED.	RX	MEDLINE=95277908; PubMed=7758166;
DR	EMBL; M84449; AAA40113_1; JOINED.	RA	Lindner V.; Giachelli C.M.; Schwartz S.M.; Reidy M.A.;
DR	EMBL; M84450; AAA40113_1; JOINED.	RT	"A subpopulation of smooth muscle cells in injured rat arteries expresses platelet-derived growth factor-B chain mRNA.";
DR	EMBL; M84451; AAA40113_1; JOINED.	RL	RT -!- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CLIN. RES. 76: 951-957(1995).
DR	EMBL; M84452; AAA40113_1; JOINED.	CC	-!- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESODERMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICTS A VARIETY OF CELLULAR RESPONSES.
DR	EMBL; M64849; AAA37485_1; JOINED.	CC	RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
DR	EMBL; M64844; AAA37485_1; JOINED.	CC	EMBL; MAY HAVE A CHEMOTACTIC ROLE IN INTIMAL THICKENING.
DR	EMBL; M64845; AAA37485_1; JOINED.	CC	-!- SUBUNIT: ANTI-PARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
DR	EMBL; M64846; AAA37485_1; JOINED.	CC	-!- TISSUE SPECIFICITY: EXPRESSED IN A DISTINCT SUBPOPULATION OF SMOOTH MUSCLE CELLS IN INJURED ARTERIES.
DR	EMBL; M64847; AAA37485_1; JOINED.	CC	-!- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.
DR	EMBL; M64848; AAA37485_1; JOINED.	CC	-!- SIMILARITY: BELONGS TO THE PDGF/VEGFR FAMILY OF GROWTH FACTORS.
DR	HSSP; E01127; IPNG.	CC	-----
DR	MGD; MG1:97528; Edgfb.	CC	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by commercial entities requires license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
DR	InterPro; IPR000072; .	CC	-----
DR	IPR002400; .	DR	EMBL; Z14117; CAR78487_1; .
DR	Pfam; PF00341; PGF; 1.	DR	EMBL; L40991; AAA70048_1; .
DR	PRINTS; PRO0438; GFCYSKNOT.	DR	PIR; S25097; S25097.
DR	PROSITE; PS00249; PDGF_1; 1.	DR	HSSP; P01127; 1PDG.
DR	PROSITE; PS50278; PDGF_2; 1.	DR	InterPro; IPR000072; .
KW	Mitogen; Growth factor; Proto-oncogene; Platelet; Signal.	CC	-----
FT	SIGNAL 1 20	FT	FTam; PF00341; PDGF; 1.
FT	PROPEP 21 81	FT	PROSITE; PS50249; PDGF; 1.
FT	CHAIN 82 190	FT	PROSITE; PS50278; PDGF; 2; 1.
FT	PROPEP 191 241	FT	NON_TER 1 1
FT	SITE 108 108	FT	FT SIGNAL <1 12
FT	SITE 111 111	FT	FT PROPEP 13 73
FT	DISULFID 97 141	FT	FT CHAIN 74 182
FT	DISULFID 130 178	FT	FT PROPEP 183 225
FT	DISULFID 134 180	FT	FT SITE 100 100
FT	DISULFID 124 124	FT	FT SITE 103 103
FT	DISULFID 133 133	FT	FT DISULFID 89 133
FT	CARBOHID 63 63	FT	FT DISULFID 122 170
FT	SEQUENCE 241 AA; 27381 MW; 3C5EB/A2DAD64178 CRC64;	FT	FT DISULFID 126 172
FT		FT	FT DISULFID 116 116
FT		FT	FT DISULFID 125 125
FT		FT	FT CARBOHYD 55 55
FT		FT	FT NON_TER 225 225
FT		SQ	SQ SEQUENCE 225 AA; 25603 MW; ODAE138B0AA70FOF CRC64;
Y	50 ANVVFPRCLLYQRCGGNCGCCGCTVNNSRSTCNNSGKTVKKYHEVLFQEPFGHKRRGAKTM 109	Query	Match 10.6%; Score 78; DB 1; Length 225;
Db	116 AFLWWPPCVEQRCSGCC----NNRNVOCRASQVOMRPVQVRKIEIVRKPIFKATV 170	Best Local Similarity 29.3%; Pred. No. 0.3;	Matches 24; Conservative 16; Mishatches 32; Indels 10; Gaps 4;
QY	110 ALVDIQLDHHERCDC-- ICSSRP 130	DE	(PDGF-2) (FRAGMENT).
Db	171 TLED----HLACKCETIVTPPP 188	GN	GN PUDGB.
RESULT 15	PDGB_RAT STANDARD; PRT; 225 AA.	OS	Rattus norvegicus (Rat).
ID	AC Q05028; Standard; PRT; 225 AA.	OC	Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Rodentia; Sciurognathia; Muridae; Murinae; Rattus.
DT	01-FEB-1994 (Rel. 28, Created)	NCBI_TaxID=10116; NCBI_TaxID=111	NCBI_TaxID=10116; NCBI_TaxID=111
DT	01-FEB-1994 (Rel. 28, Last sequence update)	RN	SEQUENCE FROM N.A. MEDLINE=93305723; PubMed=8318539;
DT	01-OCT-1996 (Rel. 34, Last annotation update)	RA	Herren B.; Weyer K.A.; Rouge M.; Loetscher P.; Pech M.;
DE	PLATELET-DERIVED GROWTH FACTOR, B CHAIN PRECURSOR (PDGF B-CHAIN)	RR	"Conservation in sequence and affinity of human and rodent PDGF ligands and receptors";
DE	(PDGF-2) (FRAGMENT).	RN	Biochim. Biophys. Acta 1173:294-302(1993).
GN		RN	[2]
OS		RR	SEQUENCE OF 74-182 FROM N.A. STRAIN=SPRAGUE-DOWLLEY; TISSUE=Smooth muscle;
OC		RC	

Search completed: September 26, 2001, 15:16:36
 Job time: 87 sec



Result No.	Score	Query Match	Length	DB ID	Description
1	100.5	13.6	148	2 D49530	16K vascular endothelial growth factor-related factor 167 precursor - mouse
2	95.5	13.0	188	2 JC4680	vascular endothelial growth factor-related protein 167
3	95.0	13.0	207	2 JN0248	vascular endothelial growth factor-related protein 167
4	94	12.8	166	2 JS0735	vascular endothelial growth factor-related protein 167
5	94	12.8	198	2 S25096	vascular endothelial growth factor-related protein 167
6	93	12.6	419	2 B28964	vascular endothelial growth factor-related protein 167
7	89	12.1	196	2 A37359	vascular endothelial growth factor-related protein 167
8	89	12.1	196	2 A48851	vascular endothelial growth factor-related protein 167
9	89	12.1	196	2 S25096	vascular endothelial growth factor-related protein 167
10	89	12.1	197	2 B49530	vascular endothelial growth factor-related protein 167
11	89	12.1	211	2 T02063	vascular endothelial growth factor-related protein 167
12	84.5	11.5	133	2 C45558	vascular endothelial growth factor-related protein 167
13	83.5	11.3	80	2 T03404	vascular endothelial growth factor-related protein 167
14	83	11.3	200	2 S08220	vascular endothelial growth factor-related protein 167
15	83	11.3	215	2 I51551	vascular endothelial growth factor-related protein 167
16	83	11.3	226	2 I51550	vascular endothelial growth factor-related protein 167
17	79	10.7	241	1 PFM5GB	vascular endothelial growth factor-related protein 167
18	78.5	10.7	80	2 T02063	vascular endothelial growth factor-related protein 167
19	78.5	10.7	333	2 B45558	vascular endothelial growth factor-related protein 167
20	78.5	10.7	342	2 C45558	vascular endothelial growth factor-related protein 167
21	78.5	10.7	366	2 D45558	vascular endothelial growth factor-related protein 167
22	78.5	10.7	1717	1 A45558	vascular endothelial growth factor-related protein 167
23	78	10.6	225	2 S25097	vascular endothelial growth factor-related protein 167
24	78	10.6	297	2 G71265	vascular endothelial growth factor-related protein 167
25	77	10.4	77	2 S52636	vascular endothelial growth factor-related protein 167
26	77	10.4	120	2 A33787	vascular endothelial growth factor-related protein 167
27	77	10.4	146	2 S57956	vascular endothelial growth factor-related protein 167
28	77	10.4	190	2 B40080	vascular endothelial growth factor-related protein 167
29	77	10.4	245	1 TVCTSS	vascular endothelial growth factor-related protein 167

near endothelial growth factors 167 and VEGF 186.

A; Reference number: S61795; MUID:96178224
 A; Status: nucleic acid sequence not shown; not compared with conceptual translation
 A; Molecule type: mRNA
 A; Residues: 70-419 <JOU1>
 A; Note: this sequence has been revised in reference S69207
 A; Accession: S71443
 A; Molecule type: protein
 A; Residues: X-104-120 <JOU2>
 R; Lee, J.; Gray, A.; Yuan, J.; Luoh, S.M.; Avraham, H.; Wood, W.I.
 Submitted to the EMBL Data Library, December 1995
 A; Description: Vascular endothelial growth factor related protein (VRP): A ligand and sp
 A; Reference number: S69208
 A; Molecule type: mRNA
 A; Residues: 1-419 <EDE>
 A; Cross-references: EMBL:U43142; NID:91150988; PIDN:AAA85214.1; PID:91150989
 R; Morris, J.C.
 Submitted to the EMBL Data Library, May 1996
 A; Reference number: H01557
 A; Accession: G02659
 A; Status: preliminary; translated from GB/EMBL/DDJB
 A; Molecule type: mRNA
 A; Residues: 1-19 <HOR>
 A; Cross-references: EMBL:U58111; NID:q1373426; PIDN:AAE02909.1; PID:91373427
 C; Genetics: VRP
 A; Gene: GDB:VEGFC; VRP
 A; Cross-references: GDB:3890803; OMIM:601528
 F; 1-12/Domain: signal sequence #status predicted <SIG>
 F; 13-102/Domain: peptide #status predicted <PRO>
 F; 103-419/Product: vascular endothelial growth factor C #status experimental <MAT>

Query Match Score 93: DB 2; Length 419;
 Best Local Similarity 20.7%; pred. No. 0.085;
 Matches 38; Conservative 20; Mismatches 50; Indels 76; Gaps 8;

Qy : 22 LDRLLDDAKRYSCTPRNYSVNVIREELKLNANVFF PRCLLVQRGGNGC----- 69
 Db 119 LKSIDNEWRKTQCMFREVCLVKFGFVAINTTEFKPPCVSYVRCCGCNSEGLCQMTNST 178
 Qy : 70 -----CGTVNWRSCTCNSGKTV-KYHEVILQ----- 94
 Db 179 SYLSKTLFEITVPLSQGPKPWTISFAHNTSQRCSMSKLDVYRQVHSITRRSLPATLPQCQA 238
 Qy : 95 -----FPFGHTKR-----RGRAKTMALVDI-----QLDHERCDCICSS 128
 Db 239 ANKTKTCPNTYMWNNHICRLAQEDFMFSSDAGDDSTDFHDDCPNKELD-ETCOCVCRA 297
 Qy : 129 --RP 130
 Db 298 GLRP 301

Query Match Score 89: DB 2; Length 196;
 Best Local Similarity 26.8%; pred. No. 0.1;
 Matches 22; Conservative 18; Mismatches 32; Indels 10; Gaps 3;
 Qy : 50 ANVVFPRCLLVQRGGNGCCTVNWRSCTCNSGKTVKKYHEVLOFEPFGHKRRGRAKTM 109
 Db 115 ANFLIWPCVEVKRTGCC-----NTSVRKCPSPRVHRSVYKVAVE-YVRKKPKLKE- 166
 C; Date: 19-Mar-1993 #sequence_revision 19-Mar-1993
 C; Accession: A37359
 R; Mercola, M.; Wang, C.; Kelly, J.; Brownlee, C.; Jackson-Grusby, L.; Stiles, C.; Bowen-
 Dev. Biol. 138, 114-122, 1990
 A; Title: Selective expression of PDGF A and its receptor during early mouse embryogenesis
 A; Reference number: A37359; MUID:90169294
 A; Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
 A; Molecule type: mRNA
 A; Cross-references: GB:M29464
 C; Superfamily: platelet-derived growth factor

Query Match 12.1%; Score 89; DB 2; Length 196;

R; Katsuyose, D.; Ohe, M.; Yamauchi, K.; Ogata, M.; Shirato, K.; Shibahara, Am. J. Physiol. 264, L100-L106, 1993

Best Local Similarity 26.8%; Pred. No. 0.1;
 Matches 22; Conservative 18; Mismatches 32; Indels 10; Gaps 3;
 Qy : 50 ANVVFPRCLLVQRGGNGCCTVNWRSCTCNSGKTVKKYHEVLOFEPFGHKRRGRAKTM 109
 Db 115 ANFLIWPCVEVKRTGCC-----NTSVRKCPSPRVHRSVYKVAVE-YVRKKPKLKE- 166
 Qy : 110 ALVDIQLDHHERCDCICSSRPP 131
 Db 167 --VQVRLLEHCALECATSINLP 186
 RESULT 8
 B28964
 Platelet-derived growth factor chain A precursor splice form 2 - human
 C; Species: Homo sapiens (man)
 C; Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 16-Jul-1999
 C; Accession: B28964; B28122
 R; Bonthron, D.T.; Morton, C.C.; Orkin, S.H.; Collins, T.
 Proc. Natl. Acad. Sci. U.S.A. 85, 1492-1496, 1988
 A; Title: Platelet-derived growth factor A chain: gene structure, chromosomal location
 A; Reference number: A28964; MUID:98144463
 A; Residues: 1-196 <BON>
 A; Cross-references: GB:M21571; GB:J03638; GB: M19985; GB: M19986; GB: M19987;
 R; Bonthron, D.; Collins, T.; Grzeschik, K.H.; van Roy, N.; speleman, F.
 Genomics 13, 257-263, 1992
 A; Title: Platelet-derived growth factor A chain: confirmation of localization of PDGF
 A; Reference number: A42002; MUID:92307656
 A; Accession: B28964
 A; Status: Preliminary; not compared with conceptual translation
 A; Molecule type: DNA
 A; Residues: 152-196 <BO2>
 R; Rorsman, P.; Bywater, M.; Knott, T.J.; Scott, J.; Betsholtz, C.
 Mol. Cell. Biol. 8, 571-577, 1988
 A; Title: Structural characterization of the human platelet-derived growth factor A-chain
 A; Reference number: A28122; MUID:88174638
 A; Accession: B28122
 A; Molecule type: mRNA
 A; Residues: 1-63, 'TRD', 67-196 <ROR>
 A; Cross-references: GB:M0488
 A; Note: the authors translated the codon ACA for residue 64 as Arg, CGT for residue 6
 C; Comment: Exon 6 is spliced out of this variant splice form. For the major splice fo
 C; Genetics:
 A; Gene: GDB:PDGF-A
 A; Cross-references: GDB:120266; OMIM:173430
 A; Position: 7p22-7p22
 C; Superfamily: platelet-derived growth factor
 C; Keywords: alternative splicing; glycoprotein; growth factor; mitogen; platelet

Query Match Score 89: DB 2; Length 196;
 Best Local Similarity 26.8%; pred. No. 0.1;
 Matches 22; Conservative 18; Mismatches 32; Indels 10; Gaps 3;
 Qy : 50 ANVVFPRCLLVQRGGNGCCTVNWRSCTCNSGKTVKKYHEVLOFEPFGHKRRGRAKTM 109
 Db 115 ANFLIWPCVEVKRTGCC-----NTSVRKCPSPRVHRSVYKVAVE-YVRKKPKLKE- 166
 Qy : 110 ALVDIQLDHHERCDCICSSRPP 131
 Db 167 --VQVRLLEHCALECATSINLP 186
 RESULT 9
 A48851
 Platelet-derived growth factor chain A precursor (version 2) - rat
 C; Species: Rattus norvegicus (Norway rat)
 C; Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
 C; Accession: A48851; I51891
 R; Katsuyose, D.; Ohe, M.; Yamauchi, K.; Ogata, M.; Shirato, K.; Shibahara, Am. J. Physiol. 264, L100-L106, 1993

A;Title: Increased expression of PDGF A- and B-chain genes in rat lungs with hypoxic pulmonary hypertension A;Reference number: A48851; MUID:93191115
A;Accession: A48851
A;Molecule type: mRNA
A;Residues: 1-196 <KAT>
A;Cross-references: GB:D10106; NID:9220839; PIDN:BAA00987.1; PID:9220840
A;Experimental source: brain
A;Note: sequence extracted from NCBI backbone (NCBIP:1266515)
C;Superfamily: platelet-derived growth factor
RESULT 10
S25096
platelet-derived growth factor chain A precursor - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Accession: S25096; S33764
R;Herren, B.; Weyer, K.A.; Rouge, M.; Loetscher, P.; Pech, M.
Biochim. Biophys. Acta 1173, 294-302, 1993
A;Title: Conservation in sequence and affinity of human and rodent PDGF ligands and receptors
A;Reference number: S33764; MUID:93305723
A;Accession: S25096
A;Molecule type: mRNA
A;Residues: 1-197 <HER1>
A;Cross-references: EMBL:Z14120; NID:956865; PIDN:CAA78490.1; PID:956866
R;Herren, B.; Weyer, K.A.; Rouge, M.; Loetscher, P.; Pech, M.
Biochim. Biophys. Acta 1173, 294-302, 1993
A;Title: Conservation in sequence and affinity of human and rodent PDGF ligands and receptors
A;Accession: S33764
A;Molecule type: mRNA
A;Residues: 89-172 <HER2>
A;Cross-references: EMBL:Z14120
C;Superfamily: platelet-derived growth factor
C;Keywords: growth factor; mitogen; platelet
RESULT 11
S25096
platelet-derived growth factor chain A precursor - human
N;Alternate names: PDGF A-chain; PDGF-1; PDGF-A; platelet-derived growth factor 1
C;Species: Homo sapiens (man)
C;Accession: A25964; S47566; A42002; A01379; S00173; A28122
R;Bontron, D.T.; Morton, C.C.; Orkin, S.H.; Collins, T.
Proc. Natl. Acad. Sci. U.S.A. 85, 1492-1496, 1988
A;Title: Platelet-derived growth factor A chain: gene structure, chromosomal location,
Query Match 12.1%; Score 89; DB 2; Length 196;
Best Local Similarity 26.8%; Pred. No. 0.1; Mismatches 18; Indels 10; Gaps 3;
Matches 22; Conservative
Qy 50 ANVVFPPRLLVYRGCGNCGCTTVNWRSCTCNSSGKTVKHYEVLQFEPGHIKRGRKAKTM 109
Db 115 ANFLIWPVCYKRCTGCC----NTSSVKCQFSRVHHSVVKAVKE-YVRKKPKLKE- 166
Qy 110 ALVDIOLDHHERDCDCICSSRPP 131
Db 167 -VQVRLDEHLECACATSNLNP 186
Query Match 12.1%; Score 89; DB 2; Length 197;
Best Local Similarity 26.8%; Pred. No. 0.1; Mismatches 18; Indels 10; Gaps 3;
Matches 22; Conservative
Qy 50 ANVVFPPRLLVYRGCGNCGCTTVNWRSCTCNSGGKTVKHYEVLQFEPGHIKRGRKAKTM 109
Db 108 ANFLIWPVCYKRCTGCC----NTSSVKCQFSRVHHSVVKAVKE-YVRKKPKLKE- 159
Qy 110 ALVDIOLDHHERDCDCICSSRPP 131
Db 160 -VQVRLDEHLECACATSNLNP 179

Qy 50 ANVVFPRCLLVQRCGGNCGGTWNRSCTCNSGKTVKKYHEVLOFEPGHIKRGRAKTM 109
Db 115 ANFLWPPCVERKTCGCC----NTSSVQCPSPVHRSVYKAVKE--YVRKPKLKE- 166
C;Species: Xenopus laevis (African clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I51551
R;Mercoll, M.; Merton, D.A.; Stiles, C.D.
Science 24, 1223-1225, 1988
A;Title: Platelet-derived growth factor A chain is maternally encoded in Xenopus embr
A;Reference number: I51550; MUID:88321676
A;Accession: I51551
A;Status: preliminary; translated from GB/EMBL/DDJB
A;Molecule type: mRNA
A;Residues: 1-200 <MER>
A;Cross-references: GB: M23238; PIDN:AAA49928..1; PID:9214651
C;Superfamily: platelet-derived growth factor

Query Match 11.3%; Score 83; DB 2; Length 200;
Best Local Similarity 26.6%; Pred. No. 0.43; Mismatches 30; Indels 10; Gaps 3;
Matches 21; Conservative 18; Mismatches 30; Indels 10;

Qy 50 ANVVFPRCLLVQRCGGNCGGTWNRSCTCNSGKTVKKYHEVLOFEPGHIKRGRAKTM 109
Db 120 ANFLWPPCVERKTCGCC----NTSSVQCPSPRTHRSVYKAVKE--YVRKPKLKE- 171
C;Accession: S08220
R;Lytle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.
J.Virol. 68, 84-92, 1994
A;Title: Homologs of vascular endothelial growth factor are encoded by the poxvirus orf
A;Reference number: A49530; MUID:94076465
A;Accession: N2
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-133 <LYT>
B;Cross-references: GB: S67520; NID:9456897; PIDN:AAB29220..1; PID:9456899
B;Note: sequence inconsistent with nucleotide translation
A;Note: sequence extracted from NCBI backbone (NCIN:141420, NCBIP:141425)

Query Match 11.5%; Score 84.5; DB 2; Length 133;
Best Local Similarity 25.4%; Pred. No. 0.2; Mismatches 47; Indels 31; Gaps 5;
Matches 32; Conservative 16; Mismatches 47; Indels 31; Gaps 5;
RESULT 15
S08220
platelet-derived growth factor chain A precursor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 16-Jul-1999
C;Accession: S08220
R;Bejcek, B.E.; Li, D.Y.; Deuel, T.F.
Nucleic Acids Res. 18, 680, 1990
A;Title: Nucleotide sequence of a cDNA clone of Xenopus platelet-derived growth facto
A;Reference number: S08220; MUID:90175018
A;Status: translation not shown
A;Molecule type: mRNA
A;Residues: 1-215 <BCJ>
A;Cross-references: EMBL: X17545; NID:964973; PIDN:CAA355583..1; PID:964974
C;Superfamily: platelet-derived growth factor
C;Keywords: alternative splicing; growth factor
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-91/Domain: propetide #status predicted <PRO>
F;92-215/Product: platelet-derived growth factor chain A #status predicted <MAT>

Qy 75 WRSCTCNSGKTVKKYHEVLOFEPGHIKRGRAKTMALVDLFQDHLHERDC- 126
Db 73 DESLVCYPTEVNTMELL-----GASGSNSGMQRLSFVEHKCDCRPREFTTPPT 124
C;Accession: T03404
R;Yu, L.H.; Umeda, M.; Liu, J.Y.; Zhao, N.M.; Uchimiya, H.
Gene 206, 29-35, 1998
C;Date: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 21-Jul-2000
A;Title: A novel Mt gene of rice plants is strongly expressed in the node portion of the
A;Reference number: Z14935; MUID:98121309
A;Accession: T03404
A;Status: preliminary; translated from GB/EMBL/DDJB
A;Molecule type: mRNA
A;Residues: 1-80 <YUL>
A;Cross-references: EMBL: AB002820; NID:91944204; PIDN:BAA19661..1; PID:91944205
C;Superfamily: metallothionein

Query Match 11.3%; Score 83.5; DB 2; Length 80;
Best Local Similarity 52.9%; Pred. No. 0.16; Mismatches 2; Indels 7; Gaps 2;
Matches 18; Conservative 2; Mismatches 7; Indels 7; Gaps 2;

Qy 64 CGGNCGGTWNRSCTCNSGKTVKKYHEVLOEPEP 97
Db 4 CGGNCGGS---SCQCGNGGCKYSEV--EP 30

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OM protein - protein search, using sw model

Run on: September 26, 2001, 15:15:09 ; Search time 12.26 Seconds
 (without alignments)
 221.691 million cell updates/sec

Title: US-09-662-783-4
 Perfect score: 737
 Sequence: 1 MYLDTPRYGRSYSHDRKSKV.....DQLDHHERCDCICSSRPPR 132

Scoring table: BLOSUM62
 Gapext 0.5

Searched: 197339 seqs, 20590346 residues

Total number of hits satisfying chosen parameters: 1973339

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0.8
 Maximum Match 1.008
 Listing first 45 summaries

Database : Issued_Patents_AA:
 1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:
 2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:
 3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:
 4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:
 5: /cgn2_6/ptodata/2/iaa/PCUTUS_COMBO.pep:
 6: /cgn2_6/ptodata/2/iaa/backfiles_1.pep:
 * pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Length	DB ID	Description
1	103	14.0	321	4 US-08-915-795-9
2	103	14.0	325	4 US-08-915-795-3
3	103	14.0	354	5 US-08-915-795-5
4	103	14.0	358	4 US-08-915-795-8
5	95.5	13.0	102	1 US-08-469-427A-2
6	95.5	13.0	102	2 US-08-469-427A-2
7	95.5	13.0	102	2 US-08-569-063C-2
8	95.5	13.0	133	1 US-08-469-427A-9
9	95.5	13.0	133	2 US-08-609-443B-9
10	95.5	13.0	133	2 US-08-569-063C-9
11	95.5	13.0	188	1 US-08-469-427A-5
12	95.5	13.0	188	2 US-08-609-443B-5
13	95.5	13.0	188	2 US-08-569-063C-5
14	95.5	13.0	207	2 US-08-609-443B-13
15	95.5	13.0	207	1 US-08-569-063C-13
16	94	12.8	195	1 US-08-469-427A-7
17	94	12.8	195	2 US-08-609-443B-7
18	94	12.8	195	2 US-08-569-063C-7
19	93	12.6	350	2 US-08-999-811-4
20	93	12.6	350	2 US-08-824-996-2
21	93	12.6	350	3 US-09-042-105-4
22	93	12.6	350	4 US-08-510-133A-33
23	93	12.6	350	4 US-08-585-695-33
24	93	12.6	419	2 US-08-999-811-2
25	93	12.6	419	3 US-09-042-105-2
26	93	12.6	419	4 US-08-795-430-8

ALIGNMENTS

RESULT	1	US-08-915-795-9
;	Sequence 9,	Application US/08915795
;	Patent No. 6235713	
;	GENERAL INFORMATION:	
;	APPLICANT: Marc G. ACHEN	
;	APPLICANT: Andrew F. WILKS	
;	APPLICANT: Steven A. STACKER	
;	APPLICANT: Kari ALITALO	
;	TITLE OF INVENTION: GROWTH FACTOR	
;	NUMBER OF SEQUENCES: 11	
;	CORRESPONDENCE ADDRESS:	
;	ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.	
;	STREET: 1200 G Street, NW, Suite 700	
;	CITY: Washington	
;	STATE: DC	
;	COUNTRY: United States of America	
;	ZIP: 20005	
;	COMPUTER READABLE FORM:	
;	MEDIUM TYPE: Floppy disk	
;	COMPUTER: IBM PC compatible	
;	OPERATING SYSTEM: PC-DOS/MS-DOS	
;	SOFTWARE: PatentIn Release #1.0, Version #1.25	
;	CURRENT APPLICATION DATA:	
;	APPLICATION NUMBER: US/08/915,795	
;	FILING DATE:	
;	ATTORNEY/AGENT INFORMATION:	
;	NAME: EVANS, Joseph D.	
;	REGISTRATION NUMBER: 26,269	
;	REFERENCE/DOCKET NUMBER: 1064/42983	
;	TELECOMMUNICATION INFORMATION:	
;	TELEPHONE: (202) 628-8800	
;	TELEFAX: (202) 628-8844	
;	TELEX: N/A	
;	INFORMATION FOR SEQ ID NO: 9:	
;	SEQUENCE CHARACTERISTICS:	
;	LENGTH: 321 amino acids	
;	TYPE: amino acid	
;	STRANDEDNESS: single	
;	TOPOLOGY: linear	
;	MOLECULE TYPE: protein	
;	ORIGINAL SOURCE:	
;	TISSUE TYPE: Mouse Lung	
;	US-08-915-795-9	
;	Query Match Score 103, DB 4;	
;	Best Local Similarity 27.0%; Pred. No. 0.00039;	
;	Matches 34; Conservative 17; Mismatches 47; Indels 28; Gaps 6;	

Qy 7 RYRGRSYHDKSKVLDLNDDAKRYSCTPRNYSNIREEL-KLANVVFPRCLLVQRCG 65
 Db 88 RFAATFIDETLKV --- IDEEWQRTQCSPTCPEVASELGKTNTFFKPCVNFRCG 143

Qy 66 GNCGCTVNRSTCNSGKT -- VVKYHEV -- LQFEPGHIKRGRAKTMALVDIQLDHH 119
 Db 144 GCC --- NEEGYMCMNTSISYISKOLFEISVPLTSVP ----- EVPVKVAH 186

RESULT 3
 Qy Sequence 5, Application US/08915795
 Db Patent No. 6235713

GENERAL INFORMATION:
 APPLICANT: Marc G. ACHEN
 APPLICANT: Andrew F. WILKS
 APPLICANT: Steven A. STACKER
 APPLICANT: Kari ALITALO
 TITLE OF INVENTION: GROWTH FACTOR
 NUMBER OF SEQUENCES: 11

ADDRESSSEE: Evanson, McKeown, Edwards & Lenahan P.L.L.C.
 STATE: DC
 ZIP: 20005

COMPUTER READABLE FORM:
 COMPUTER: IBM PC compatible
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/915,795
 FILING DATE: 5/36
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D.
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/42983
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8840
 TELEFAX: (202) 628-8844
 TELEX: N/A
 INFORMATION FOR SEQ ID NO: 5:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 354 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: Human Lung

US-08-915-795-5

Query Match Score 103; DB 4; Length 354;
 Best Local Similarity 27.8%; Pred. No. 0.0004;
 Matches 35; Conservative 17; Mismatches 46; Indels 28; Gaps 6;

Qy 7 RYRGRSYHDKSKVLDLNDDAKRYSCTPRNYSNIREEL-KLANVVFPRCLLVQRCG 65
 Db 59 RFAATFIDETLKV --- IDEEWQRTQCSPTCPEVASELGKTNTFFKPCVNFRCG 114

Qy 66 GNCGCTVNRSTCNSGKT -- VVKYHEV -- LQFEPGHIKRGRAKTMALVDIQLDHH 119
 Db 115 GCC --- NEEGYMCMNTSISYISKOLFEISVPLTSVP ----- EVPVKVAH 186

RESULT 4
 US-08-915-795-8

Sequence 8, Application US/08915795
Patent No. 6235713

GENERAL INFORMATION:

APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS

APPLICANT: Steven A. STACKER

APPLICANT: Kari ALITALO

TITLE OF INVENTION: GROWTH FACTOR

NUMBER OF SEQUENCES: 11

CORRESPONDENCE ADDRESS:

ADDRESSEE: Evanson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700

CITY: Washington

STATE: DC

COUNTRY: United States of America

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/915,795

FILING DATE:

CLASSIFICATION: 536

ATTORNEY/AGENT INFORMATION:

NAME: EVANS, Joseph D.

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET NUMBER: 1064/42983

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 628-8800

TELEFAX: (202) 628-8844

TELEX: N/A

INFORMATION FOR SEQ ID NO: 8:

SEQUENCE CHARACTERISTICS:

LENGTH: 358 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

ORIGINAL SOURCE: 8:

SEQUENCE: Mouse Lung

US-08-915-795-8

NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS: US/08/397,651

ADDRESSEE: Evanson, McKeown, Edwards & Lenahan
STREET: 1200 G Street, N.W., Suite 700

CITY: Washington

STATE: DC

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/469,427A

FILING DATE: 06-JUN-1995

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/397,651

FILING DATE: 01-MAR-1995

ATTORNEY/AGENT INFORMATION:

NAME: Evans, Joseph D.

REGISTRATION NUMBER: 26,269

REFERENCE/DOCKET NUMBER: 41979cp2

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 628-8800

TELEFAX: (202) 628-8844

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 102 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: Linear

MOLECULE TYPE: protein

HYPOTHETICAL: NO

ORIGINAL SOURCE:

SEQUENCE: US-08-469-427A-2

Query Match 13.0%: Score 95.5; DB 1; Length 102;

Best Local Similarity 27.9%; Pred. No. 0.00068;

Matches 29; Conservative 16; Mismatches 38; Indels 21; Gaps 5;

QY 31 RYSCTPRNYSVNIREELKLANYV --FFPRLCLLYORCGNCNGGTWNWRSCTCNSGKTVKK 88

RESULT 6

US-08-609-443B-2

Sequence 2, Application US/08609443B

Patent No. 5607918

GENERAL INFORMATION:

APPLICANT: Eriksson, Ulf

APPLICANT: Olofsson, Birgitta

APPLICANT: Alitalo, Kari

APPLICANT: Pajusola, Katri

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

TITLE OF INVENTION: DNA CODING THEREFOR

NUMBER OF SEQUENCES: 57

CORRESPONDENCE ADDRESS:

ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C.

STREET: 1200 G Street, N.W., Suite 700

CITY: Washington

STATE: DC

COUNTRY: USA

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

Sequence 9, Application US/08469427A

Patent No. 5607918

GENERAL INFORMATION:

APPLICANT: Alitalo, Kari

APPLICANT: Pajusola, Katri

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

TITLE OF INVENTION: DNA CODING THEREFOR

RESULT 5

US-08-469-427A-2

Sequence 2, Application US/08469427A

Patent No. 5607918

GENERAL INFORMATION:

APPLICANT: Eriksson, Ulf

APPLICANT: Olofsson, Birgitta

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

TITLE OF INVENTION: DNA CODING THEREFOR

COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/609,443B
 FILING DATE: 01-MAR-1996
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/397,651
 FILING DATE: 01-MAR-1995
 PRIOR APPLICATION DATA:
 NAME: EVANS, Joseph D
 APPLICATION NUMBER: US 08/469,427
 FILING DATE: 06-JUN-1995
 REGISTRATION NUMBER: 26,269
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/569,063
 FILING DATE: 06-DEC-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1064/41979CP3
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse embryo
 LENGTH: 1064/41979CP3
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse embryo
 US-08-609-443B-2

Query Match 13.0%; Score 95.5; DB 2; Length 102;

Best Local Similarity 27.9%; Pred. No. 0.00065;

Matches 29; Conservative 16; Mismatches 38; Indels 21; Gaps 5;

RESULT 7

US-08-569-063C-2

Sequence 2, Application US/08569063C

Patent No. 5928939

GENERAL INFORMATION:

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

CORRESPONDENCE ADDRESS: PAJUSOLA, Katri

APPLICANT: PAJUSOLA, Katri

APPLICANT: ERIKSSON, Ulf

APPLICANT: OLOFSSON, Birgitta

APPLICANT: ALITPALO, Kari

APPLICANT: Edwards & Lenahan

ADDRESSSEE: Evenson, McKeown, Edwards & Lenahan, P.L.L.C.

STREET: 1200 G Street, N.W., Suite 700

CITY: Washington

STATE: DC

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/469,427A

FILING DATE: 06-JUN-1995

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/397,651

FILING DATE: 01-MAR-1995

ATTORNEY/AGENT INFORMATION:

CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/569,063C
 FILING DATE: 06-DEC-1995
 PRIORITY APPLICATION DATA:
 APPLICATION NUMBER: US 08/469,427
 FILING DATE: 06-JUN-1995
 PRIORITY APPLICATION DATA:
 APPLICATION NUMBER: US 08/397,651
 FILING DATE: 01-MAR-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/41979CP3
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 102 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse embryo
 US-08-569-063C-2

Query Match 13.0%; Score 95.5; DB 2; Length 102;
 Best Local Similarity 27.9%; Pred. No. 0.00068;
 Matches 29; Conservative 16; Mismatches 38; Indels 21; Gaps 5;

Qy 31 RYSCTPRNYSVIREELKANVV-FPPRCLLIVQRGGNCGGTVNWRSCCTNSGKTVKK 88
 Db 13 RATCOPREVVVPLSMEL-MGNVVKOLVPSVTVQRCC--GCCPDGLECVPTGQHVRM 68

Qy 89 YHEVLQEPGHIKRGRAKTMLVDIQLDHHMERCDCCTSSRRPR 132
 Db 69 QILMIQY-----PSSQLGEMSLEEHQSQCEC---RFFK 97

RESULT 8

Qy 31 RYSCTPRNYSVIREELKANVV-FPPRCLLIVQRGGNCGGTVNWRSCCTNSGKTVKK 88
 Db 13 RATCOPREVVVPLSMEL-MGNVVKOLVPSVTVQRCC--GCCPDGLECVPTGQHVRM 68

Qy 89 YHEVLQEPGHIKRGRAKTMLVDIQLDHHMERCDCCTSSRRPR 132
 Db 69 QILMIQY-----PSSQLGEMSLEEHQSQCEC---RFFK 97

RESULT 7

US-08-569-063C-2

Patent No. 5928939

GENERAL INFORMATION:

APPLICANT: ERIKSSON, Ulf

APPLICANT: OLOFSSON, Birgitta

APPLICANT: ALITPALO, Kari

APPLICANT: PAJUSOLA, Katri

TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSSEE: Evenson, McKeown, Edwards & Lenahan

STREET: 1200 G Street, N.W., Suite 700

CITY: Washington

STATE: DC

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/469,427A

FILING DATE: 06-JUN-1995

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/397,651

FILING DATE: 01-MAR-1995

ATTORNEY/AGENT INFORMATION:

NAME: Evans, Joseph D
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 41979GP2
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 INFORMATION FOR SEQ ID NO: 9:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 133 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-469-427A-9

Query Match 13.0%; Score 95.5; DB 2; Length 133;
 Best Local Similarity 27.9%; Pred. No. 0.00095;
 Matches 29; Conservative 16; Mismatches 38; Indels 21; Gaps 5;

Qy 31 RYSCTPRNYSVNIREELKIANVV--FFPRCLLYORCGGNGCCGTVNWRSCCTCNSGKTVKK 88
 Db 44 RATCOPREVVPLSMEL-MGNVVKQLVSPCTVQRCG--GCCPDGGLECVPTRGQHQVRM 99

Qy 89 YHEVILQFERGHIKRGRAKTMAVDIQLDHHERDCICSSRPPR 132
 Db 100 QILMIQY-----PSSQLEBMSLHEHSQEC---RPKK 128

RESULT 10

US-08-569-063C-9
 Sequence 9, Application US/08569063C
 Patent No. 5928939

GENERAL INFORMATION:
 APPLICANT: ERIKSSON, Ulf
 APPLICANT: OLOFSSON, Birgitta
 APPLICANT: ALITALO, Kari
 APPLICANT: PAJUSOLA, Katri
 TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 TITLE OF INVENTION: DNA CODING THEREFOR
 NUMBER OF SEQUENCES: 23
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C.
 STREET: 1200 G Street, N.W., Suite 700
 CITY: Washington
 STATE: DC
 COUNTRY: USA
 ZIP: 20005
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/569, 063C
 FILING DATE: 06-DEC-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US/08/569, 063C
 FILING DATE: 06-DEC-1995
 CLASSIFICATION: 435

PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/397, 651
 FILING DATE: 01-MAR-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/609, 443B
 FILING DATE: 01-MAR-1996
 CLASSIFICATION: 435

PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/569, 063
 FILING DATE: 06-DEC-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/469, 427
 FILING DATE: 06-JUN-1995

INFORMATION FOR SEQ ID NO: 9:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 133 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-569-063C-9

RESULT 13
 US-08-569-063C-5
 ; Sequence 5, Application US/08569063C
 ; Patent No. 5928939
 ; GENERAL INFORMATION:
 ; APPLICANT: ERISSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan, P.L.L.C.
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/609,443B
 ; FILING DATE: 01-MAR-1996
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397,651
 ; FILING DATE: 01-DEC-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D
 ; REGISTRATION NUMBER: 1064/41979CP3
 ; FILING DATE: 01-MAR-1995
 ; PRIORITY DATA:
 ; APPLICATION NUMBER: US 08/469,427
 ; FILING DATE: 06-JUN-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397,651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1064/41979CP3
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 5:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 188 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; HYPOTHETICAL: NO
 ; ORIGINAL SOURCE:
 ; TISSUE TYPE: adult mouse heart
 ; US-08-569-063C-5

Query Match 13.0%; Score 95.5; DB 2; Length 188;
 Best Local Similarity 27.9%; Pred. No. 0.001%; Indels 21; Gaps 5;

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Query Match 13.0%; Score 95.5; DB 2; Length 188;
 Best Local Similarity 27.9%; Pred. No. 0.001%; Indels 21; Gaps 5;

Qy 89 YHEVLOQFEPGHIKRRGRAKTMALVLDHHERCDCICSSRPR 132
 Db 100 QILMIQY-----PSSQLGEMSLEERSQCEC---RPKK 128

RESULT 15
 US-08-569-063C-13
 ; Sequence 13, Application US/08569063C
 ; Patent No. 5928939
 ; GENERAL INFORMATION:
 ; APPLICANT: ERISSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; TITTLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:
 ADDRESSEE: Evenson, McKeown, Edwards & Lenahan, P.L.L.C.
 STREET: 1200 G Street, N.W., Suite 700
 CITY: Washington
 STATE: DC
 COUNTRY: USA
 ZIP: 20005
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/569,063C
 FILING DATE: 06-DEC-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/469,427
 FILING DATE: 06-JUN-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/397,651
 FILING DATE: 01-MAR-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 1064/41979CP3
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 INFORMATION FOR SEQ ID NO: 13:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 207 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse
 US-08-569-063c-13

Query Match Score 95.5; DB 2; Length 207;
 Best Local Similarity 27.9%; Pred. No. 0_0017;
 Matches 29; Conservative 16; Mismatches 38; Indels 21; Gaps 5;
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 Qy 89 YHEVLQFEPGHIKRRGAKTMAVLQDHHFRCDCICSSRPPR 132
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About: Results were produced by the Gencore software, version 4.5,
Copyright (C) 1993-2000 Compugen Ltd.

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Query length: 132
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LOCUS AY027517 3729 bp mRNA PRI 22-MAR-2001
DEFINITION Homo sapiens iris-expressed growth factor long form (IEGF) mRNA,
complete cds, alternatively spliced.

ACCESSION AY027517

KEYWORDS human.

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.

REFERENCE 1 (bases 1 to 3729)
TITLE Iris-expressed Growth Factor (IEGF)
JOURNAL Unpublished
AUTHORS Wistow,G
TITLE Direct Submission
JOURNAL Submitted (13-FEB-2001) MSF, NEI, 6/331, NIH, Bethesda, MD
FEATURES Location/Qualifiers

LOCUS AF113216 3739 bp mRNA
DEFINITION Homo sapiens MSTP036 mRNA, complete cds.
PRI 12-DEC-2000

ACCESSION AF113216
 VERSION AF113216.1 GI:11640579
 KEYWORDS human.
 SOURCE ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.
 REFERENCE AUTHORS Liu, B., Liu, Y.Q., Wang, X.Y., Zhao, B., Sheng, H., Zhao, X.W., Liu, S., Xu, Y.Y., Wu, J., Song, L., Gao, Y., Zhang, C.L., Zhang, J.J., Wei, Y.J., Qiao, H.Q., Zhao, Y., Liu, L.S., Ding, R.L., Gao, R.L., Wu, Q.Y., Qiang, B.Q., Yuan, J.G., Lieu, C.C., Zhao, M.S. and Hui, R.T.
 TITLE Direct Submission
 JOURNAL Submitted (15-DEC-1998) Molecular Medical Center for Cardiovascular Disease, Cardiovascular Institute, CAMS & PUMC, 167, Bei Li Shi Lu, Beijing 100037, P.R.China
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 DEFINITION Sequence 52 from Patent WO0066736.
 ACCESSION AX044538
 VERSION AX044538.1 GI:11343390
 KEYWORDS house mouse,
 SOURCE house mouse,
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus;
 REFERENCE 1 (bases 1 to 1472)
 AUTHORS Gilbert, T., Hart, C.E., Shappard, P.O. and Gilbertson, D.G.
 TITLE Growth factor homolog zregf4
 JOURNAL Patent: WO 0066736-A 52 09-NOV-2000;
 Zymocinetics, Inc. (US)
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 857 GICCAAAGTGACCTGGACAGGTCAATGATGTCAGCGTACAGT 906
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 907 GCACCTCCAGGATTACTCGGTAAATAAGAACAGCTGAGTGGCC 956
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101 LysArgGlyArgAlaLysthrMetAlaLeuValAspIleGlnLeuAs 117
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LOCUS AB052170 1386 bp mRNA ROD 10-FEB-2001
 DEFINITION ratus norvegicus rSCDGF-B mRNA for spinal-cord derived growth factor-B, complete cds.

ACCESSION AB052170
 VERSION AB052170.1 GI:11610600

KEYWORDS Rattus norvegicus cDNA to mRNA.

SOURCE Rattus norvegicus

ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;

REFERENCE Hamada,T., Ui-Tei,K., Imaki,J. and Miyata,Y.
 Molecular Cloning of SCDGF B, a Novel Growth Factor Homologous to SCDGF/B/DGFB/C/falloretin. Mol. Cell. Biol. 20(12):6269-6277 (2000)

AUTHORS Hamada,T., Ui-Tei,K. and Miyata,Y.
 TITLE Department of Pharmacology; Sendagi 1-1-5, Bunkyo, Tokyo 113-8602,
 Japan (E-mail: t.hamada@nms.ac.jp, Tel:81-3-3822-2131(ex.5277),
 Fax:81-3-5814-1684)

FEATURES Location/Qualifiers

source
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 /db_xref="taxon:10116"

gene
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 T'VEDILKYYFPNAPSWQDLENLYDPRYRGSYHERSKDLDRLNDDVKRISCTPRN
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BASE COUNT 383 a 330 c 332 g 341 t
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 US-09-662-783-4 x AB052170

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  . Ratio: 5.603 Gaps: 0
Percent Similarity: 100.000 Percent Identity: 100.000
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36 oArgAsnTyrSerValAsnIleArgGluGluLeuLysLeuIaasnVal 53
18997 CAGGAATTACTCGGTCAATATAAGAAGCTGAATGTTGGCAATGTGG 18
53 alPhepheProArgCysLeuLeuValGlnArgCysGlyGlyAsnCysGly 69
18897 TCTTCCTTCCACGTTGCCTCCCTGCGACGCGCTCTGGAGGAAATGTGGC 18

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70	CysGlyInrValAsnTrpArgSerCysThrCysAsnSerGlyLysTrhRva	86
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18797	GAAAAGTATCATGAGGTA	18779

eq_name: gb_htg24 : AP00298
eq_documentation block:

COMMENT On Aug 17, 2000 this sequence version replaced gi:7109658.

Genome Center -----

Center: Washington University Genome Sequencing Center
 Center code: WUGSC
 Web site:<http://genome.wustl.edu/gsc/index.shtml>

Project Information -----

Center project name: H_NH0617B03
 Summary Statistics -----

Sequencing vector: M13; 100%
 Sequencing vector: plasmid; 0%
 Chemistry: Dye-primer ET; 100% of reads
 Chemistry: Dye-terminator Big Dye; 0% of reads
 Assembly program: Phrap; version 0.990319
 Consensus quality: 178574 bases at least Q40
 Consensus quality: 179480 bases at least Q30
 Consensus quality: 179940 bases at least Q20
 Insert size: 183143; sum-of-contigs
 Insert size: 183143; sum-of-contigs
 Quality coverage: 5.39 in Q20 bases; agarose-fp
 Quality coverage: 5.87 in Q20 bases; sum-of-contigs

* NOTE: This is a 'working draft' sequence. It currently consists of 7 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown.
 * This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.

1 1666: contig of 1666 bp in length
 * 1667 1766: gap of unknown length
 * 1767 9133: contig of 7367 bp in length
 * 9134 9233: gap of unknown length
 * 9234 20663: contig of 11430 bp in length
 * 20664 20763: gap of unknown length
 * 20764 35927: contig of 15164 bp in length
 * 35928 36027: gap of unknown length
 * 36028 61610: contig of 25583 bp in length
 * 61611 61710: gap of unknown length
 * 61711 96167: contig of 34437 bp in length
 * 96168 96267: gap of unknown length
 * 96268 182403: contig of 86136 bp in length.

FEATURES source

1. 182403 Qualifiers

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misc_feature

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Ratio: 5.603 Percent Similarity: 100.000 Gaps: 0
 Percent Identity: 100.000

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 53 ALPHEPHPROAGTGCyLeuValGlnArgCysGlyGlyAsCysGly 69
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seq_documentation_block:

LOCUS AB03329 1675 bp mRNA VRT 26-JUL-2000
 DEFINITION Gallus gallus SCDFG mRNA for spinal cord-derived growth factor, complete cds.

ACCESSION AB03329
 VERSION AB03329.1 GI:0392291
 KEYWORDS spinal cord-derived growth factor; scdfg gene,
 SOURCE Gallus gallus (strain:white leghorn) embryo, spinal cord cDNA to mRNA.

ORGANISM Gallus gallus
 TAXONID 9606
 SUBSTRATE Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 KINGDOM Archosauria; AVES; Neognathae; Galliformes; Phasianidae;
 PHASIANINE: Gallus.

REFERENCE 1 (sites)
 AUTHORS Hamada,T., Ui-Tei,K. and Miyata,Y.
 TITLE A novel gene derived from developing spinal cords, SCDFG, is a unique member of the PDGF/VEGF family(1).
 JOURNAL FEBS Lett. 475 (2), 97-102 (2000)
 20317014
 MEDLINE
 REFERENCE 2 (bases 1 to 1675)
 AUTHORS Hamada,T., Ui-Tei,K. and Miyata,Y.
 TITLE Direct Submission
 JOURNAL Submitted (25-Oct-1999) to the DBJ/EMBL/GenBank databases.
 TSUYOSHI HAMADA, Nippon Medical School, Department of Pharmacology,
 1-1-5, SENDAGI, BUNKYO-ku, Tokyo 113-8602, Japan
 (E-mail:t-hamada@ems.ac.jp, Tel:81-3-3822-2131(ex.5277), Fax:81-3-5814-1684)

FEATURES source

1. 1675 Qualifiers
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ORIGIN					

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 Percent Similarity: 76.744 Percent Identity: 50.388

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65 YGlyAsnCysGlyCysGlySerCysThrCysAsns 82
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seq_documentation_block: 16-SEP-2000

LOCUS AB027935 1035 bp DNA PAT PRI 16-SEP-2000

DEFINITION Sequence 3 from Patent WO0037641.

VERSION AB027935_1 GI:10188752

KEYWORDS human.

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 1035)

AUTHORS Gordon, R.D., Dijkhuis, J.J., Sprengel, J.J., Yon, J.R., Xu, J.,
 Goslewski, A., and Dhanaraj, S.N.

TITLE Vascular endothelial growth factor-x

JOURNAL Patent: WO 0037641-A 29-JUN-2000;

GORDON ROBERT DOUGLAS (BE) ; DIJKHUIS JOSEINA JOHANNA HUBER (BE) ;
 JANSSEN PHARMACEUTICA NV (BE) ; SPRENDEL JORG JERGEN (BE) ; YON
 JEFFREY ROLAND (BE) ; XU JEAN (US) ; GOSIENSKA ANNA (US) ; DHANARAJ
 SRIDEVI NAIDU (US)

FEATURES Location/Qualifiers

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BASE COUNT ORIGIN

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 About: Results were produced by the GenCore software, version 4.5,
 Copyright (c) 1993-2000 Compugen Ltd.

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AC: AAF24197;	XX			
DT: 02-APR-2001 (first entry)	XX			
Human VEGF-G coding region.	XX			
Vascular endothelial growth factor; VEGF; cancer; cell; angiogenesis; ss.	XX			
Homo sapiens.	OS			
XX	PN	WO200100878-A2.		
XX	XX	WPI: 2001-050129/06.		
PD: 04-JAN-2001.	XX			
XX	XX	29-JUN-2000; 2000WO-US18085.		
XX	PF			
PR: 30-JUN-1999; 99US-0343671.	XX			
XX	PA	(MILL-) MILLENNIUM PHARM INC.		
XX	PI	Gearing DP;		
XX	PS	WPI: 2001-050129/06.		
XX	XX	New vascular endothelial growth factor family member used for diagnosis		
XX	PT	and treatment of deregulated cell growth e.g. cancer, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases -		
XX	PT	aberrant VEGF-G protein or nucleic acid expression or activity		
XX	CC	molecules are used as modulating agents or as targets for		
XX	CC	developing modulating agents to regulate a variety of cellular processes e.g. cell proliferation, differentiation, migration and wound repair. VEGF-G modulators, i.e. VEGF-G protein, peptide, peptidomimetic or nucleic acid are used to treat a subject with		
XX	CC	aberrant VEGF-G protein or nucleic acid expression or activity e.g. deregulated cell growth, such as cancer, hypertrophic bone disorders, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases e.g. rheumatoid arthritis. VEGF-G gene expression is inhibited through the administration of antisense molecules or ribozymes and by targeting the regulatory region of VEGF-G to prevent transcription of the gene in target cells.		
XX	CC	Sequence 1: Fig 1; 142pp; English.		
XX	CC	The present invention relates to a vascular endothelial growth factor (VEGF) family member, VEGF-G. VEGF-G protein and nucleic acid		
XX	CC	sequences, modulating agents or as targets for		
XX	CC	cellular processes e.g. cell proliferation, differentiation, migration and wound repair. VEGF-G modulators, i.e. VEGF-G protein, peptide, peptidomimetic or nucleic acid are used to treat a subject with		
XX	CC	aberrant VEGF-G protein or nucleic acid expression or activity e.g. deregulated cell growth, such as cancer, hypertrophic bone disorders, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases e.g. rheumatoid arthritis. VEGF-G gene expression is inhibited through the administration of antisense molecules or ribozymes and by targeting the regulatory region of VEGF-G to prevent transcription of the gene in target cells.		
XX	CC	Quality: 737.00	Length: 132	
XX	SQ	Ratio: 5.583	Gaps: 0	
XX	SQ	Percent Similarity: 100.000	Percent Identity: 100.000	
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XX	Align seg 1/1 to: AAF24197 from: 1 to: 1110			
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715 ATGATATGGACACCCTCGGTATCAGGCAGGTCATACCATGACCGAA 764
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 101 LysArgArgGlyArgAlaLysLysTyrHisGluValLeuValAspIleInLeuAs 117
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seq_documentation_block:

ID AAC81555 standard; cDNA: 1882 BP.

AC AAC81555;

DT 09-MAR-2001 (first entry)

XX Human growth factor homologue zvegf4 cDNA, SEQ ID No:1.
 XX Human; zvegf4; growth factor homologue; VEGF/PDGF family;
 XX CUB domain; PDGF-like activity; mitogenic; osteogenic;
 XX neovascularisation; tissue repair; proliferation; differentiation;
 XX liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis;
 XX immunomodulation; hepatic; chromosome 11q22.3-23.1; ss.
 XX Homo sapiens.
 PN WO2000066736-A1.

PD 09-NOV-2000.

XX P03-MAY-2000; 2000WO-US40047.

XX PR 03-MAY-1999; 99US-0304216.

PR 10-NOV-1999; 99US-0164463.

PR 04-FEB-2000; 2000US-0180169.

XX (ZYMO) ZYMOGENETICS INC.

Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;

XX WPI; 2000-687541/67.

DR P-PSDB: AAB48653.

XX Growth factor homologs and the nucleic acids that encode them, useful

e.g. for treating liver damage, ischemia, multiple sclerosis and

Alzheimer's disease -

XX Claim 35; Page 106-110; 143pp; English.

PS

117 PHISHisGluArgCysAspCysIleCysSerSerArgProProArg 132

CC The invention relates to the human growth factor homologue zvegf4 (AB48653), and nucleic acids encoding it (AAC81555). Zvegf4 is a member of the PDGF (platelet-derived growth factor) /VEGF (vascular endothelial growth factor) family. Zvegf4 has a growth factor domain (AAB48654) characterised by a PDGF cystine knot structure, and a CUB domain (AB48655) which has a beta barrel structure. Zvegf4 has PDGF-like activity, having mitogenic activity on fibroblasts, vascular smooth muscle cells and pericytes, and has also been shown to stimulate bone growth. The invention also relates to fusion proteins comprising human zvegf4 or fragments thereof, particularly human zvegf4/human zvegf3 fusions; expression constructs and host cells comprising human zvegf4 nucleic acids; the recombinant expression of human zvegf4; an antibody which binds to human zvegf4 or a fragment thereof; a method of activating a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a method of modulating the proliferation, differentiation, migration or CC metabolism of bone cells, comprising exposing bone cells to CC zvegf4-derived polypeptides; and a method of detecting a genetic CC abnormality in the zvegf4 gene of a patient. Zvegf4 proteins and derived CC fragments may be used to stimulate tissue development or repair, or CC cellular differentiation or proliferation. They are particularly used for CC the treatment or repair of liver damage, and may also be used to CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or CC multiple sclerosis). Due to their osteogenic activity, they may be used CC in the treatment of periodontal disease and fractures. They may also be CC used to enhance expansion and mobilisation of haemopoietic stem cells CC and endothelial precursor stem cells, which may be useful in the CC treatment of ischaemia, in wound healing, and in the modulation of the CC immune system. The present sequence represents cDNA encoding human CC zvegf4.

XX Sequence 1882 BP; 566 A; 407 C; 430 G; 479 T; 0 other;

SO

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 Percent Similarity: 100.000
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 US-09-662-783-4 * AAC81555 ..

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 XX
 PD 18-MAY-2000.
 XX
 PF 10-NOV-1999; 99WO-US26462.
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 PR 28-DEC-1998; 98US-0113991.
 PR 26-AUG-1999; 99US-0150604.
 PR 04-OCT-1999; 99US-0157108.
 PR 05-OCT-1999; 99US-0157756.
 XX
 PA (LUDWIG INST CANCER RES. (UHHE-) UNIV HELSINKI LICENSING LTD OY.
 XX
 PT Eriksson U, Aase K, Ponten A, Lee X, Uuteila M, Alitalo K;
 PI Oestman A, Heldin C;
 XX
 DR P-PSDB, AAY1129.
 XX
 PT Novel polynucleotides encoding a novel growth factor of cells expressing a platelet-derived growth factor, useful for diagnostic and therapeutic applications, e.g. concerning cancer -
 XX
 PS Claim 1; Fig 5; 111pp; English.
 CC The present sequence is the 5' truncated partial cDNA #2, encoding human platelet derived growth factor (PDGF)-D, formally known as Vascular Endothelial Growth Factor (VEGF)-G. It is derived from human foetal lung lambda 10 cDNA library. It belongs to the VEGF/PDGF family. It functions as an activator of proliferation, differentiation, growth and motility of cells, that express PDGF-D receptor. This sequence is useful for inhibiting the proteolytic cleavage for generating an activated truncated PDGF-D and its antagonist is useful for inhibiting receptor binding specificity of PDGF-D. Invasion of tumour cells into normal cells, PDGF-D may be used to treat wounds, atherosclerosis, metastasis and migration of smooth muscle cells.
 XX Sequence 1934 BP, 632 A; 366 C; 394 G; 542 T; 0 other;
 SQ alignment_scores:
 Quality: 737.00 Length: 132
 Ratio: 5.583 Gaps: 0
 Percent Similarity: 100.000 Percent Identity: 100.000
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 17 SerLysValAspLeuAspPheLeuAsnAspSerTyrSerTyrSerC 34
 621 GCGAAAAGTTGACCTGCTGGATAGGGCTCACTGATGTCAGCTTACAGTT 670
 34 TyrThrProArgSerTyrSerValAsnTleArgGluLeuLysLeuAla 50
 671 GACTCCAGGATTACTGGTAAATAGAGAAGGCTGAATGGGCC 720
 51 AsnVaValPhePheProArgCysLeuValGlnArgCysGlyGlyAs 67
 721 AATGGGCTCTTTCAGGTTCTTCAGGCTGCTCGTGAGGAA 770
 67 noyGlyCysGlyThrValAsnTtpArgSerTyrSerTyrSerTyr 84
 771 TGTGGCTGTGSAACTGTCAAACGTGGAGTCCCTGCACATGCAATTCAGGA 820

84 ysthrVallysLysTyrHisGluValLeuGlnPheGluProGlyHistle 100
 821 AAACCGTGAAAGTATACTGAGTATACAGTTGACCTGACCTGCACATC 870
 101 LysArgArgGlyArgAlaLysThrMetAlaLeuValAspIleGlnLeuAs 117
 871 ARAGGGGGTAGAGCTAACATGGCTCPAGTTGACATCCAGTGG 920
 117 PHISHisGluArgCysASPcysteSerSerArgProProArg 132
 921 TCACCATGAACTGAGTGCATGATCTGAGCTAACGACCCVCGA 966

seq_name: /SIDS1/gcqdata/geneseq/geneseq/NA2000.DAT:AAD00738
 seq_documentation_block:
 ID AAD00738 standard; cDNA: 2253 BP.
 XX
 AC AAD00738;
 XX
 DT 08-SEP-2000 (first entry)
 XX
 DE Human Platelet Derived Growth Factor (PDGF)-D encoding complete cDNA.
 XX
 KW Platelet Derived Growth Factor-D; PDGF-D; human; cytostatic; vulnerability;
 KW VEGF-G; Vascular Endothelial Growth Factor; antiatherosclerotic; tumour;
 KW proliferative; activator; proliferation; differentiation; motility;
 KW growth; PDGF-D receptor; antagonist; tissue remodelling; treat;
 KW atherosclerosis; wound; metastasis; ss.
 XX
 OS Homo sapiens.
 XX
 Location/Qualifiers
 Key
 FT 176..1288 /*tag= a
 FT /product= "Human PDGF-D protein"
 FT /note= "Platelet derived growth factor"
 PN WO200027879-A1.
 XX
 PD 18-MAY-2000.
 XX
 PP 10-NOV-1999; 99WO-US26462.
 XX
 PR 10-NOV-1998; 98US-0107852.
 PR 28-DEC-1998; 98US-0113997.
 PR 26-AUG-1999; 99US-0150604.
 PR 04-OCT-1999; 99US-0157108.
 PR 03-OCT-1999; 99US-0157756.
 XX
 PA (LUDWIG INST CANCER RES. (UHHE-) UNIV HELSINKI LICENSING LTD OY.
 PA
 XX
 PI Eriksson U, Aase K, Ponten A, Lee X, Uuteila M, Alitalo K;
 PI Oestman A, Heldin C;
 XX
 DR WPI: 2000-376495/32.
 DR P-PSDB; AAY1130.
 XX
 PT Novel polynucleotides encoding a novel growth factor of cells expressing a platelet-derived growth factor, useful for diagnostic and therapeutic applications -
 XX
 PR Claim 1; Fig 7; 111pp; English.
 XX
 CC The present sequence is the complete cDNA encoding human platelet derived growth factor (PDGF)-D, formally known as Vascular Endothelial Growth Factor (VEGF)-G. It is derived from human foetal lung lambda g110 cDNA library. It belongs to the VEGF/PDGF family. It functions as an activator of proliferation, differentiation, growth and motility of cells, that express PDGF-D receptor. This sequence is useful for inhibiting the growth of tumours, that express PDGF-D. Expression of PDGF-D and its proteolytic cleavage for generating an activated truncated form is useful for regulating receptor binding specificity of PDGF-D. The present sequence is the complete cDNA encoding human platelet derived growth factor (PDGF)-D, formally known as Vascular Endothelial Growth Factor (VEGF)-G. It is derived from human foetal lung lambda g110 cDNA library. It belongs to the VEGF/PDGF family. It functions as an activator of proliferation, differentiation, growth and motility of cells, that express PDGF-D receptor. This sequence is useful for inhibiting the growth of tumours, that express PDGF-D. Expression of PDGF-D and its proteolytic cleavage for generating an activated truncated form is useful for regulating receptor binding specificity of PDGF-D. PDGF-D antagonist

CC is useful for inhibiting tissue remodelling during the invasion of tumour cells into normal cells. PDGF-D may be used to treat wounds, CC atherosclerosis, metastasis and migration of smooth muscle cells.

XX Sequence 2253 BP; 701 A; 464 C; 490 G; 598 T; 0 other;

alignment_scores:

Quality:	737.00	Length:	132
Ratio:	5.583	Gaps:	0
Percent Similarity:	100.000	Percent Identity:	100.000

alignment_block:

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US-09-662-783-4 x AAD00738 .
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17 sSerLysValAspLeuAspAspAlaLysArgGlySerC 34
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 940 GTCAAAGTTGACCTGGATACTGCTCAATGATGATGCCAACGGTACAGTT 989

34 Ysth-ProArgAsnTyrrSerValAsnIleArgGluGlueLysLeuAla 50
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 990 GCACCTCCAGGAATTACTCGTCATATAAGAGAAGGCTGAAGTTGGCC 1039

51 AsnValValPheProArgCysLeuLeuValGlnInargCysGlyGlyas 67
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1040 AAATGEGTCTCTTTCACGTGCTCTGCACATGCAATTAGGGAA 1089

67 nCysGlyCysGlyThrValAsnTrpArgSerCysThrCysAsnSerGlyL 84
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1090 TTGTGCTGCGAACTGTCACTGAGGCTCTGCCACATGCAATTAGGGAA 1139

84 YsthValLysLystyrrHisGluValLeuGlnPheGluProGlyHisIle 100
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 1140 AAACCTGAAAAAGPATCATGAGSATTACAGTTGAGCTTGGCCACATC 1189

.101 LysArgArgGlyArgGalaLysthrMetAlaLeuValAspIleGlnLeuAs 117
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1190 AAGAGAGGGTAGCTAGACCATGGCTCAAGACCACCTCCA 1239

117 PHISHisGluArgCysAspCysIleCysSerSerArgProProArg 132
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seq_documentation_block:

ID AAF24196 standard; DNA; 3853 BP.

XX AAF24196;

AC

XX DT 02-APR-2001 (first entry)

XX DE Human VEGF-G cDNA.

XX KW Vascular endothelial growth factor; VEGF; cancer; cell; angiogenesis; ss.

XX OS Homo sapiens.

XX PN WO200100878-A2.

XX PD 04-JAN-2001.

XX PF 29-JUN-2000; 2000WO-US180885.

XX PR 30-JUN-1999; 990S-0343671.

PA (MILL-) MILLENNIUM PHARM INC.

XX Gearing DP;

PI XX

DR XX WPI; 2001-050129/06.

XX New vascular endothelial growth factor family member used for diagnosis and treatment of deregulated cell growth e.g. cancer, disorders involving aberrant angiogenesis e.g. Psoriasis, and chronic inflammatory diseases.

XX Claim 1; Fig 1; 142pp; English.

XX The present invention relates to a vascular endothelial growth factor (VEGF) family member, VEGF-G, VEGF-G protein and nucleic acid molecules are used as modulating agents or as targets for developing modulating agents to regulate a variety of cellular processes e.g. cell proliferation, differentiation, migration and wound repair. VEGF-G modulators, i.e. VEGF-G protein peptide, polypeptide or nucleic acid are used to treat a subject with aberrant VEGF-G protein or nucleic acid expression or activity e.g. deregulated cell growth, such as cancer, hyper trophic bone disorders, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases e.g. rheumatoid arthritis. VEGF-G gene expression is inhibited through the administration of antisense molecules or ribozymes and by targeting the regulatory region of VEGF-G to prevent transcription of the gene in target cells.

XX Sequence 3853 BP; 1194 A; 771 C; 757 G; 1131 T; 0 other;

XX SQ alignment_scores:

Quality:	737.00	Length:	132
Ratio:	5.583	Gaps:	0
Percent Similarity:	100.000	Percent Identity:	100.000

align seg 1/1 to: AAF24196 from: 1 to: 3853

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 977 ATGTTATCTGACACCCCTCGTATGAGCTCAAGCTAACATGACCGAA 976

1 MettyLeuAspThrProArgTyrrArgGlyArgSerTyrrHisAspArgly 17
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34 Ysth-ProAsnTyrrSerValAsnIleArgGluGlueLysLeuAla 50
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 1027 GCACCTCCAGGAATTACTCGTCATATAAGAGAAGGCTGAAGTTGCC 1076

51 AsnValValPheProArgCysLeuLeuValGlnInargCysGlyGlyas 67
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1077 ATGTTGCTGACCTGGATAGCTCAATGATGATGCCAACGGTACAGTT 1026

34 Ysth-ProAsnTyrrSerValAsnIleArgGluGlueLysLeuAla 50
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1078 GCACCTCCAGGAATTACTCGTCATATAAGAGAAGGCTGAAGTTGCC 1076

67 nCysGlyCysGlyThrValAsnTrpArgSerCysLeuLeuValGlnPheGluProGlyHisIle 100
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1127 TTGTGGCTGNGAACTGTCAACTGTGACATGCAATTAGGGAA 1176

84 YsthValLysLystyrrHisGluValLeuGlnPheGluProGlyHisIle 100
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1177 AAACCGTGAAGATCATGAGTTACGTGTTGCGCTCCGTGACGGCTGTGGAA 11226

101 LysArgArgGlyArgAlaLysLysthrMetAlaLeuValAspIleGlnLeuAs 117
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1227 AGAGAGGGTAGCTAGACCATGGCTCAAGACCACCTCCA 1276

117 PHISHisGluArgCysAspCysIleCysSerSerArgProProArg 132
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 1277 TCACCATGAAAGATGGATGATGCTGAGCTCAAGACCACCTCCA 1322

seq_name: /SIDS1/gcqdata/geneseq/geneseq/NA2000.DAT:AAD00736

seq_documentation_block:

ID AAD00736 standard; cDNA; 690 BP.

XX

AC

XX

DT

08-SEP-2000 (first entry)

XX

DE Human Platelet Derived Growth Factor (PDGF)-D encoding partial cDNA #1.

XX

KW Platelet Derived Growth Factor-D; PDGF-D; human; cytosolic; vulnerable;

KW vascular Endothelial Growth Factor; antiatherosclerotic; tumour;

KW proliferative; activator; proliferation; differentiation; motility;

KW growth; PDGF-D receptor; antagonist; tissue remodelling; treat;

XX

KW atherosclerosis; wound; metastasis; ss.

XX

OS Homo sapiens.

XX

FH key

FT

CDS

XX

Location/Qualifiers

1..603

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FT

/partial

/product "Human PDGF-D partial polypeptide #1"

FT

/note "5' truncated platelet derived growth factor"

XX

WO2000027879-A1.

XX

PD 18-MAY-2000.

XX

PF 10-NOV-1999; 99WO-US26462.

XX

PR 10-NOV-1998; 98US-0107852.

PR 28-DEC-1998; 98US-0113997.

PR 26-AUG-1999; 99US-0150604.

PR 04-OCT-1999; 99US-0157108.

PR 05-OCT-1999; 99US-0157756.

XX

PA (LUDWIG INST CANCER RES.

PA (UYHE- UNIV HELSINKI LICENSING LTD OY.

XX

PT Novel polynucleotides encoding a novel growth factor of cells

PT expressing a platelet-derived growth factor, useful for diagnostic and

PT therapeutic applications, e.g. concerning cancer -

XX

PS Claim 1; Fig 3; ILLPP; English.

XX

CC the present sequence is the 5' truncated partial cDNA #1, encoding human

CC platelet derived growth factor (PDGF)-D, formerly known as vascular

CC lamdag10 cDNA library. It belongs to the VEGF/PDGF family. It functions

CC as an activator or proliferator, differentiation, growth and motility of

CC cells, that express PDGF-D receptor. This sequence is useful for

CC inhibiting the growth of tumours, that express PDGF-D. Expression of

CC PDGF-D and its proteolytic cleavage for generating an activated truncated

CC form is useful for regulating receptor binding specificity of PDGF-D.

CC PDGF-D antagonist is useful for inhibiting tissue remodelling during the

CC invasion of tumor cells into normal cells. PDGF-D may be used to treat

CC wounds, atherosclerosis, metastasis and migration of smooth muscle cells.

XX Sequence 690 BP; 202 A; 157 C; 166 G; 165 T; 0 other;

SQ alignment_scores:

Quality: 713.00 Length: 132

Ratio: 5.443 Gaps: 0

Percent Similarity: 99.242 Percent Identity: 97.727

alignment_block:

US-09-662-783-4 x AAD00736 ..

Align seg 1/1 to: AAD00736 from: 1 to: 690

XX

AC

XX

DT

08-SEP-2000 (first entry)

XX

DE Human Platelet Derived Growth Factor (PDGF)-D encoding partial cDNA #1.

XX

KW Platelet Derived Growth Factor-D; PDGF-D; human; cytosolic; vulnerable;

KW vascular Endothelial Growth Factor; antiatherosclerotic; tumour;

KW proliferative; activator; proliferation; differentiation; motility;

KW growth; PDGF-D receptor; antagonist; tissue remodelling; treat;

XX

KW atherosclerosis; wound; metastasis; ss.

XX

OS Homo sapiens.

XX

FH key

FT

CDS

XX

Location/Qualifiers

1..603

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FT

/partial

/product "Human PDGF-D partial polypeptide #1"

FT

/note "5' truncated platelet derived growth factor"

XX

WO2000027879-A1.

XX

PD 18-MAY-2000.

XX

PF 10-NOV-1999; 99WO-US26462.

XX

PR 10-NOV-1998; 98US-0107852.

PR 28-DEC-1998; 98US-0113997.

PR 26-AUG-1999; 99US-0150604.

PR 04-OCT-1999; 99US-0157108.

PR 05-OCT-1999; 99US-0157756.

XX

PA (LUDWIG INST CANCER RES.

PA (UYHE- UNIV HELSINKI LICENSING LTD OY.

XX

PT Novel polynucleotides encoding a novel growth factor of cells

PT expressing a platelet-derived growth factor, useful for diagnostic and

PT therapeutic applications, e.g. concerning cancer -

XX

PS Claim 1; Fig 3; ILLPP; English.

XX

CC the present sequence is the 5' truncated partial cDNA #1, encoding human

CC platelet derived growth factor (PDGF)-D, formerly known as vascular

CC lamdag10 cDNA library. It belongs to the VEGF/PDGF family. It functions

CC as an activator or proliferator, differentiation, growth and motility of

CC cells, that express PDGF-D receptor. This sequence is useful for

CC inhibiting the growth of tumours, that express PDGF-D. Expression of

CC PDGF-D and its proteolytic cleavage for generating an activated truncated

CC form is useful for regulating receptor binding specificity of PDGF-D.

CC PDGF-D antagonist is useful for inhibiting tissue remodelling during the

CC invasion of tumor cells into normal cells. PDGF-D may be used to treat

CC wounds, atherosclerosis, metastasis and migration of smooth muscle cells.

XX Sequence 690 BP; 202 A; 157 C; 166 G; 165 T; 0 other;

SQ alignment_scores:

Quality: 713.00 Length: 132

Ratio: 5.443 Gaps: 0

Percent Similarity: 99.242 Percent Identity: 97.727

seq_documentation_block:

ID

AAC81596

standard; DNA.

XX

AC

XX

DT

09-MAR-2001 (first entry)

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DT

09-MAR-2001

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

AC

XX

PF

AAC81596;

XX

DE Mouse growth factor homologue zvegf4 DNA, SEQ ID NO:52.

ID

AAC81596

standard; DNA.

XX

P-PSDB; AAB48663.

Growth factor homologs and the nucleic acids that encode them, useful e.g. for treating liver damage, ischemia, multiple sclerosis and Alzheimer's disease -

Example 19; Page 136-138; 143pp; English.

The invention relates to the human growth factor homologue zvegf4 (AAB48654), and nucleic acids encoding it (AAC81555). Zvegf4 is a member of the PDGF (platelet-derived growth factor) family. Zvegf4 has a growth factor domain (AAB48654) characterised by a PDGF cystine knot structure, and a CUB domain (AAB48655) which has a beta barrel structure. Zvegf4 has PDGF-like activity, having mitogenic activity on fibroblasts, vascular smooth muscle cells and pericytes, and has also been shown to stimulate bone growth. The invention also relates to fusion proteins comprising human zvegf4 or fragments thereof, particularly human zvegf4/human zvegf3 fusions; expression constructs and host cells comprising human zvegf4 nucleic acids; the recombinant expression of human zvegf4; an antibody which binds to human zvegf4 or a fragment thereof; a method of activating a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a method of modulating the proliferation, differentiation, migration or metabolism of bone cells, comprising exposing bone cells to zvegf4-derived polypeptides; and a method of detecting a genetic abnormality in the zvegf4 gene of a patient. Zvegf4 proteins and derivatives may be used to stimulate tissue development or repair, or cellular differentiation or proliferation. They are particularly used in the treatment or repair of liver damage, and may also be used to modulate neurite growth (e.g., in the treatment of Alzheimer's disease or multiple sclerosis). Due to their osteogenic activity, they may be used in the treatment of periodontal disease and fractures. They may also be used to enhance expansion and mobilisation of haematopoietic stem cells and endothelial precursor stem cells, which may be useful in the treatment of ischaemia, in wound healing, and in the modulation of the immune system. The present sequence represents DNA encoding mouse zvegf4.

alignment_scores: Quality: 686.00 Length: 132

alignment_block:
US-09-6662-783-4 x AAC81596 ..

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 1007 CTGTTGTTGGAACTGTCAACTGGAACTGGCAGCATGCACTCAGGA
 84 YsthrVallysLysTyrHisGluValLeuGlnPheGluProGlyHisIle

105 AGACATGGAAGAAGTATCATGGGTATTGAAAGTTGACCTGGCCCTGACATTTTC 1106
 101 LysArgArgGlyArgAlaLysThrMetAlaLeuValAspIleGlnLeuAs 117
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 1107 AAGAGAACGGCAAAAGCTAAAGATAATGGCTCTTGATATCCAGCTGA 1156

117 pHishisGluArgCysAspCysIleCysSerArgProProArg 132
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 seq_documentation_block:
 ID AAF24199 standard; DNA; 1110 BP.
 XX
 AC AAF24199;
 XX 02-APR-2001 (first entry)
 XX DE Human VEGF-G coding region.
 XX KW vascular endothelial growth factor; VEGF; cancer; cell; angiogenesis; ss.
 XX OS Homo sapiens.
 XX PN WO200100878-A2.
 XX PD 04-JAN-2001.
 XX DR 29-JUN-2000; 2000WO-US18085.
 XX PR 30-JUN-1999; 99US-0343671.
 XX PA (MILL-) MILLENNIUM PHARM INC.
 XX PT Gearing DP;
 XX WPI: 2001-050129/06.
 XX DR 2001-050129/06.
 CC PT New vascular endothelial growth factor family member used for treatment of deregulated cell growth e.g. cancer, disorders involving aberrant angiogenesis e.g. psoriasis, and chronic inflammatory diseases -
 CC PT Claim 1; Fig 8; 142pp; English.
 CC The present invention relates to a vascular endothelial growth factor (VEGF) family member, VEGF-G. VEGF-G protein and nucleic acid molecules are used as modulating agents or as targets for developing modulating agents to regulate a variety of cellular processes e.g. cell proliferation, differentiation, migration, wound repair, VEGF-G modulators, i.e. VEGF-G protein, peptide, peptidomimetic or nucleic acid are used to treat a subject with aberrant VEGF-G protein or nucleic acid expression or active e.g. deregulated cell growth, such as cancer, hypertrophic disorders, disorders involving aberrant angiogenesis e.g. psoriasis and chronic inflammatory diseases e.g. rheumatoid arthritis gene expression is inhibited through the administration of molecules or ribozymes and by targeting the regulatory regions to prevent transcription of the gene in target cells.
 XX Sequence 1110 BP; 313 A; 267 C; 269 G; 261 T; 0 other;
 SQ alignment_scores:
 Quality: 681.00 Length: 132
 Ratio: 5.198 Gaps: 0
 Percent Similarity: 99.242 Percent Identity: 89.394
 alignment_block:
 US-09-662-783-x AAF24199 ...

KW	periodontal disease; bone fracture; wound healing; pulmonary; ischaemia;
KW	immunomodulation; hepatic; ds.
OS	Homo sapiens.
OS	synthetic.
XX	WO200066736-A1.
XX	09-NOV-2000.
XX	03-MAY-2000; 2000WO-US40047.
XX	03-MAY-1999; 99US-0304216.
PR	10-NOV-1999; 99US-0164463.
PR	04-FEB-2000; 2000US-0180169.
XX	(ZYMO) ZYMOGENETICS INC.
PA	Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;
PA	WPI: 2000-687541/67.
XX	Growth factor homologs and the nucleic acids that encode them, useful e.g. for treating liver damage, ischemia, multiple sclerosis and Alzheimer's disease -
PT	Claim 34: Page 114; 143pp; English.
PT	The invention relates to the human growth factor homologue zvegf4 (AAB48653), and nucleic acids encoding it (AAC81555). Zvegf4 is a member of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial growth factor) family. Zvegf4 has a growth factor domain (AAB48654) characterised by a PDGF cystine knot structure, and a CUB domain (AAB48655) which has an beta barrel structure. Zvegf4 has PDGF-like activity, having mitogenic activity on fibroblasts, vascular smooth muscle cells and pericytes, and has also been shown to stimulate bone growth. The invention also relates to fusion proteins comprising human zvegf4 or fragments thereof, particularly human zvegf4/human zvegf4 fusions; expression constructs and host cells comprising human zvegf4 nucleic acids; the recombinant expression of human zvegf4; an antibody which binds to human zvegf4 or a fragment thereof; a method of activating a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a method of modulating the proliferation, differentiation, migration or metabolism of bone cells, comprising exposing bone cells to zvegf4-derived polypeptides; and a method of detecting a genetic abnormality in the zvegf4 gene of a patient. Zvegf4 proteins and derived fragments may be used to stimulate tissue development or repair, or cellular differentiation or proliferation. They are particularly used for the treatment or repair of liver damage, and may also be used to modulate neurite growth (e.g., in the treatment of Alzheimer's disease or multiple sclerosis). Due to their osteogenic activity, they may be used in the treatment of periodontal disease and fractures. They may also be used to enhance expansion and mobilisation of haemopoietic stem cells and endothelial precursor stem cells, which may be useful in the treatment of ischaemia, in wound healing, and in the modulation of the immune system. The present sequence represents a degenerate DNA encoding a protein having a high degree of homology with zvegf4.

human 2^{vegf4}.

10-NOW-1000;

10 - NOV - 1995 - 03204402:

10-NOV-1998 : 98HS-0107852.

28-DEC-1998; 98US-0113997.

26-AUG-1999; 990US-0150604.

04-OCT-1999; 99US-0157108.

05-021:1999; 99005-0157/156.

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卷之三

Eriksson U, Aase K, Ponter

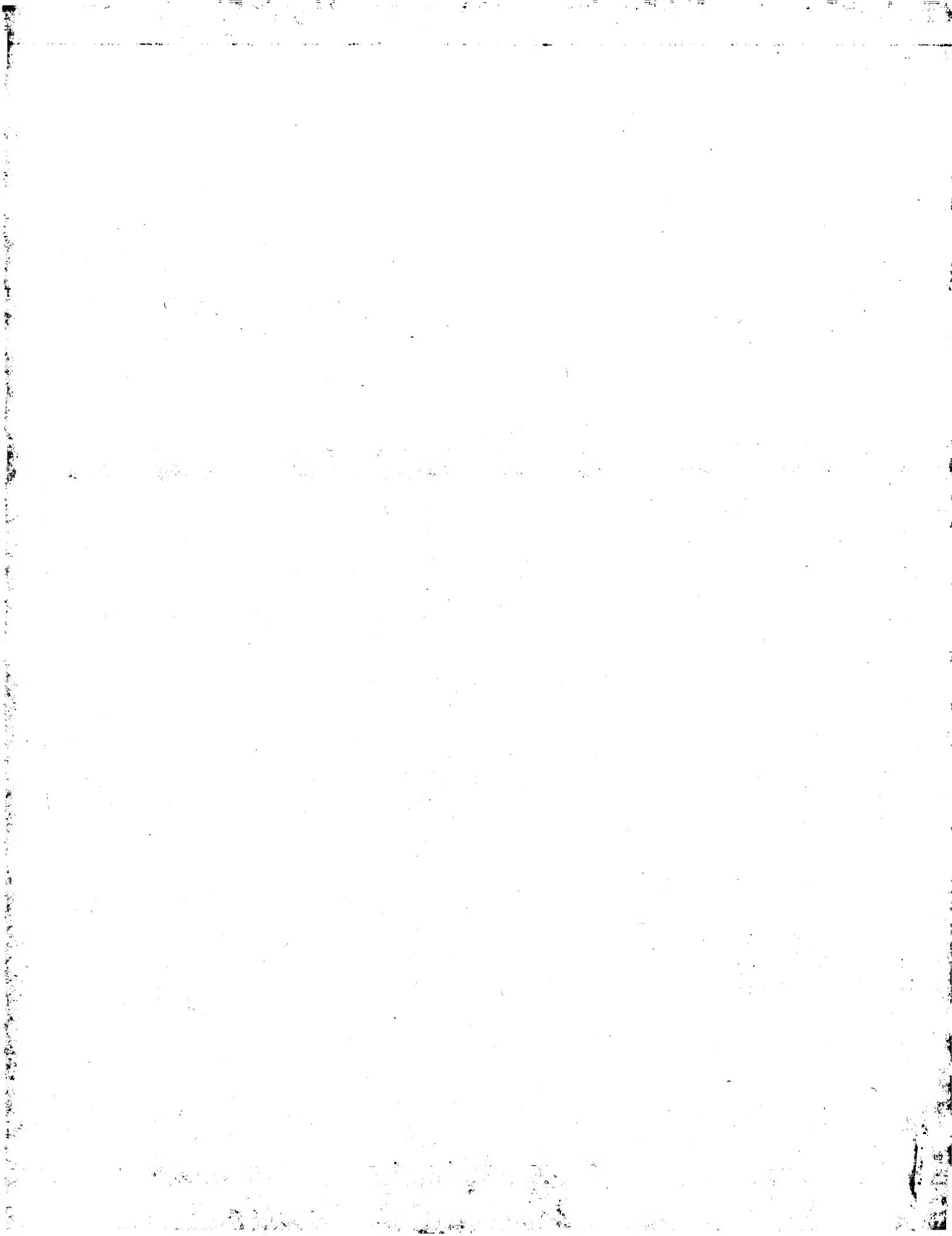
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Oestman A, Heldin C;

10

Cysteine knot; platelet-derived growth factor; PDGF; neuropilin;
 KW chromosome 4q28.3; cystostatic; anti-psoriatic; anti-inflammatory;
 KW anti-diabetic; ophthalmological; anti-rheumatic; anti-arthritis;
 KW vulnerability; maltose binding protein; NBP; ss.
 XX Chimeric - Homo sapiens.
 OS Chimeric - Synthetic.
 XX WO20034474-A2.
 XX PD 15-JUN-2000.
 XX PF 07-DEC-1999; 99WO-US28968.
 XX PR 07-DEC-1998; 98US-0307120.
 PR 07-JUL-1999; 99US-0142576.
 PR 21-OCT-1999; 99US-0161653.
 PR 12-NOV-1999; 99US-0165255.
 XX PA (ZYMO) ZYMOGENETICS INC.
 XX Gao Z, Hart CE, Piddington CS, Sheppard PO, Shoemaker KE;
 PI Gilbertson DG, West JW;
 XX WPI: 2000-423420/36.
 XX PT Novel zvegf3 polypeptides and nucleotides encoding them useful for
 PT stimulating growth of smooth muscle cells and fibroblasts comprising an
 PT epitope bearing portion of a specific amino acid sequence
 XX Example 28: Page 172-173; 173pp; English..
 CC This DNA encodes human zVEGF3 (a novel vascular endothelial growth
 CC factor homologue) fused N-terminally to maltose binding protein (MBP).
 CC Polypeptides comprising an epitope-bearing portion human or murine
 CC zVEGF3 are claimed. The growth factors comprise a growth factor domain
 CC and a CUB domain (generic sequence motifs are shown in AAY96059 and
 CC AAY96860). The growth factor domain is characterized by an arrangement of
 CC cysteine residues and beta strands that is characteristic of the
 CC "cysteine knot" structure of the platelet-derived growth factor (PDGF)
 CC family. The CUB domain shows homology to CUB domains in neuropilins,
 CC human bone morphogenetic protein-1, porcine seminal plasma protein,
 CC bovine acidic seminal fluid protein and Xenopus laevis tollloid-like
 CC protein. Structural analysis and homology predict that zVEGF3
 CC polypeptides complex with a second polypeptide to form multimeric
 CC proteins. The human zvegf3 gene has been mapped to chromosome 4q28.3.
 CC zVEGF3 is useful for stimulating the growth of fibroblasts or smooth
 CC muscles cells, for activating cell surface PDGF-alpha receptor and for
 CC inhibiting PDGF-alpha receptor mediated cellular processes. zVEGF3 is
 CC useful for regulating (post-development) organ growth, regeneration and
 CC maintenance, as well as tissue maintenance and repair processes. zVEGF3
 CC antagonists are useful for treating cancer, rheumatoid arthritis,
 CC diabetic retinopathy, ischemic limb disease, peripheral vascular disease,
 CC myocardial ischemia, vascular intimal hyperplasia, atherosclerosis, wound
 CC healing, chronic liver disease and haemangioma formation. zVEGF3 can also
 CC be used to modulate neurite growth and development of the nervous system,
 CC and for treating neurodegenerative diseases.
 XX Sequence 1095 BP, 320 A; 227 C; 267 G; 281 T; 0 other;

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About: Results were produced by the GenCore software, version 4.5
Copyright (c) 1993-2000 Compugen Ltd.

Date: Sep 26, 2001 8:54 PM

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-GAPOP=12.000 -GAPEXT=4.000 -MINMATCH=0.100 -LOOPCL=0.000
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-YGAPEXT=0.500 -DELEXT=7.000 -START=1
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Search information block:
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Query length: 132
Database: Issued_Patents_NA: *
Database sequences: 324599
Database length: 9465562
Search time (sec): 56.970000

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 ; PATENT NO. 6235113
 ; GENERAL INFORMATION:
 ; APPLICANT: Marc G. ACHEN
 ; APPLICANT: Andrew F. WILKS
 ; APPLICANT: Steven A. STACKER
 ; APPLICANT: Kari ALITALO
 ; TITLE OF INVENTION: GROWTH FACTOR
 ; NUMBER OF SEQUENCES: 11
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan P.L.L.C.
 ; STREET: 1200 G Street, NW, Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: United States of America
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patentin Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/915,795
 ; FILING DATE:
 ; CLASSIFICATION: 536
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D.
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1064/4/2993
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 6:
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 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
 ; HYPOTHETICAL: NO
 ; ORIGINAL SOURCE:
 ; TISSUE TYPE: Mouse Lung
 ; US-08-915-795-6

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 ; Patent No. 6235113
 ; GENERAL INFORMATION:
 ; APPLICANT: Marc G. ACHEN
 ; APPLICANT: Andrew F. WILKS
 ; APPLICANT: Steven A. STACKER
 ; APPLICANT: Kari ALITALO
 ; TITLE OF INVENTION: GROWTH FACTOR
 ; NUMBER OF SEQUENCES: 11
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan P.L.L.C.
 ; STREET: 1200 G Street, NW, Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: United States of America
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
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 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patentin Release #1.0, Version #1.25
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 ; APPLICATION NUMBER: US/08/915,795
 ; FILING DATE:
 ; CLASSIFICATION: 536
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D.
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1064/4/2993
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 6:
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 ; LENGTH: 1325 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
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 ; MOLECULE TYPE: cDNA
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 ; US-08-915-795-6
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 ; REGISTRATION NUMBER: 26,269

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 ; Patent No. 5607918
 ; GENERAL INFORMATION:
 ; APPLICANT: Eriksson, Ulf
 ; APPLICANT: Olofsson, Birgitta
 ; APPLICANT: Alitalo, Kari
 ; APPLICANT: Pajusola, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; TITLE OF INVENTION: DNA CODING THEREFOR
 ; NUMBER OF SEQUENCES: 17
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
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 ; COMPUTER: IBM PC compatible
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 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
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 ; APPLICATION NUMBER: US/08/469,427A
 ; FILING DATE: 06-JUN-1995
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397, 651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Evans, Joseph D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 41979cp2
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
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 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
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 ; Patent No. 5840693
 ; GENERAL INFORMATION:
 ; APPLICANT: ERIKSSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; NUMBER OF SEQUENCES: 57
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C.
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA
 ; ZIP: 20005
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 ; FILING DATE: 01-JUN-1995
 ; CLASSIFICATION: 435
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 ; APPLICATION NUMBER: US 08/397, 651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Evans, Joseph D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 41979cp2
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 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
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 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, JOSEPH D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1054/41979CP4
 ; TELECOMMUNICATION INFORMATION:
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 ; TELEFAX: (202) 628-8844
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 ; TOPOLOGY: linear
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    Patent No. 592939
    GENERAL INFORMATION:
    / APPLICANT: ERIKSSON, Ulf
    / APPLICANT: OLOFSSON, Birgitta
    / APPLICANT: ALITALO, Kari
    / APPLICANT: PAJUSOLA, Katri
    / TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B / A
    / TITLE OF INVENTION: DNA CODING THEREFOR
    / NUMBER OF SEQUENCES: 23
    / CORRESPONDENCE ADDRESS:
    / ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C
    / STREET: 1200 G Street, N.W., Suite 700
    / CITY: Washington
    / STATE: DC
    / COUNTRY: USA
    / ZIP: 20005
    COMPUTER READABLE FORM:
    MEDIUM TYPE: FLOPPY disk
    COMPUTER: IBM PC compatible
    OPERATING SYSTEM: PC-DOS/MS-DOS
    SOFTWARE: Patent In Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/08/569-063C
    FILING DATE: 06-DEC-1995
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/08/569-063C
    FILING DATE: 06-JUN-1995
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/08/397-651
    FILING DATE: 01-MAR-1995
    ATTORNEY/AGENT INFORMATION:

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95 egluProGlyHisIleLysArgArgGlyArgAlaLysThrMetAlaLeuV 112
 ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: ::::: :::::
 316 C. CCGAGGAGTCAGCTGG 332

112 alAspIleGlnLeuAspHisGluArgCysAspCysIleCysSerSer 128
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 333 GGAGATGTCCCCTGGAGAACACAGCCAATGTGAATGC. 370

129 ArgProProArg 132
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seq_name: /cgn2_6/ptodata/2/in4/5B_COMB.seq:US-08-569-063C-4

seq_documentation_block:
 ; Sequence 4, Application US/08569063C
 ; Patent No. 5928939

; GENERAL INFORMATION:
 ; APPLICANT: ERIKSSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND
 ; NUMBER OF SEQUENCES: 23
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evenson, McKeown, Edwards & Lenahan, P.L.L.C.
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/569, 063C
 ; FILING DATE: 06-DEC-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/469, 427
 ; FILING DATE: 06-JUN-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397, 651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D
 ; REGISTRATION NUMBER: 26, 269
 ; REFERENCE/DOCKET NUMBER: 1064/41979CP3

TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 4:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 565 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
 ; HYPOTHETICAL: NO
 ; ORIGINAL SOURCE: adult mouse heart
 ; TISSUE TYPE: adult mouse heart
 ; US-08-569-063C-4

FILING DATE: 06-JUN-1995
 PRIORITY APPLICATION DATA:
 APPLICATION NUMBER: US 08/569,063
 FILING DATE: 06-DEC-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: EVANS, Joseph D
 REGISTRATION NUMBER: 26 269
 REFERENCE/DOCKET NUMBER: 1064/41979CP4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 INFORMATION FOR SEQ ID NO: 12:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 624 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: cDNA
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse
 US-08-609-413B-12

alignment_scores:
 Quality: 95.50 Length: 104
 Ratio: 1.736 Gaps: 5
 Percent Similarity: 52.885 Percent Identity: 27.885

alignment_block:
 US-09-662-783-4 x US-08-609-443B-12 ..

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47 uLsLeuAlaAsnValVal.....PhPheProArgysLeuLeuValG 62
 180 C...ATGGCCAATGGTCAAAACAAACTAGTGCACGCTGTGACTGTGC 226

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 227 AGGCTGTGGT.....GGCTGTCGCCCTGACGATGGCTGGAAATGT 267

79 ThrcysAsnSerGlyLysThrValLysLysTyrHisGluValLeuGlnPh 95
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95 eGluProGlyHisIleLysArgArgGlyArgAlaLysThrMetAlaLeuV 11.2
 :||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
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112 alaspIleGlnLeuAspHisGluArgAspCysLysCysSerSer 128
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373 AGACCAAAAAA 384

seq_name: /sgn2_6/podata/2/ina/5B_COMB.seq:us-08-569-063C-12
 seq.documentation.block:
 ; Sequence 12, Application US/08569063C
 ; Patent No. 592839
 ; GENERAL INFORMATION:
 ; APPLICANT: ERIKSSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

; TITLE OF INVENTION: DNA CODING THEREFOR
 ; NUMBER OF SEQUENCES: 23
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C.
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/569,063C
 ; FILING DATE: 06-DEC-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/469,427
 ; FILING DATE: 06-JUN-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397,651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1064/41979CP3
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 12:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 624 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
 ; HYPOTHETICAL: NO
 ; ORIGINAL SOURCE:
 ; TISSUE TYPE: mouse
 ; US-08-569-063C-12

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 Quality: 95.50 Length: 104
 Ratio: 1.736 Gaps: 5
 Percent Similarity: 52.885 Percent Identity: 27.885

alignment_block:
 US-09-662-783-4 x US-08-569-063C-12 ..

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47 uLsLeuAlaAsnValVal.....PhPheProArgysLeuLeuValG 62
 180 C...ATGGCCAATGGTCAAAACAACTAGTGCACGCTGTGACTGTGC 226

62 InargCysSlyGlyAsnCysGlyCysGlyThrValAsnTpArgSerCys 78
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 227 AGGCTGTGGT.....GGCTGTCGCCCTGACGATGGCTGGAAATGT 267

79 ThrcysAsnSerGlyLysThrValLysLysTyrHisGluValLeuGlnPh 95
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268 GTGCCACTGGCACACACAGCGAATGCAAGATCCCATGCCAGATA 317

95 eGluProGlyHisIleLysArgArgGlyArgAlaLysThrMetAlaLeuV 11.2
 :||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
 318 C.....CCCCAGCTGAGCTGG 334

112 alaspIleGlnLeuAspHisGluArgAspCysLysCysSerSer 128
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335 GGAGATGNCCTGGAAAACACAGCCAAATGTAATGC..... 372

129 ArgProProArg 132
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373 AGACCAAAAAA 384

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 ; Sequence 12, Application US/08569063C
 ; Patent No. 592839
 ; GENERAL INFORMATION:
 ; APPLICANT: ERIKSSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

; TITLE OF INVENTION: DNA CODING THEREFOR
 ; NUMBER OF SEQUENCES: 23
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Evanson, McKeown, Edwards & Lenahan, P.L.L.C.
 ; STREET: 1200 G Street, N.W., Suite 700
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA
 ; ZIP: 20005
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/569,063C
 ; FILING DATE: 06-DEC-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/469,427
 ; FILING DATE: 06-JUN-1995
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 08/397,651
 ; FILING DATE: 01-MAR-1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: EVANS, Joseph D
 ; REGISTRATION NUMBER: 26,269
 ; REFERENCE/DOCKET NUMBER: 1064/41979CP3
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (202) 628-8800
 ; TELEFAX: (202) 628-8844
 ; INFORMATION FOR SEQ ID NO: 12:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 624 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: cDNA
 ; HYPOTHETICAL: NO
 ; ORIGINAL SOURCE:
 ; TISSUE TYPE: mouse
 ; US-08-569-063C-12

alignment_scores:
 Quality: 95.50 Length: 104
 Ratio: 1.736 Gaps: 5
 Percent Similarity: 52.885 Percent Identity: 27.885

alignment_block:
 US-09-662-783-4 x US-08-569-063C-12 ..

Align seg 1/1 to: US-08-569-063C-12 from: 1 to: 624

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 130 CGTCCCACATGCCAGCCAGGGACGTGGTCTCTGAGCATGGAACT 179

47 uLsLeuAlaAsnValVal.....PhPheProArgysLeuLeuValG 62
 180 C...ATGGCCAATGGTCAAAACAACTAGTGCACGCTGTGACTGTGC 226

62 InargCysSlyGlyAsnCysGlyCysGlyThrValAsnTpArgSerCys 78
 ||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
 227 AGGCTGTGGT.....GGCTGTCGCCCTGACGATGGCTGGAAATGT 267

79 ThrcysAsnSerGlyLysThrValLysLysTyrHisGluValLeuGlnPh 95
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268 GTGCCACTGGCACACACAGCGAATGCAAGATCCCATGCCAGATA 317

95 eGluProGlyHisIleLysArgArgGlyArgAlaLysThrMetAlaLeuV 11.2
 :||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::||| ::|||
 318 C.....CCCCAGCTGAGCTGG 334

112 alaspIleGlnLeuAspHisGluArgAspCysLysCysSerSer 128
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335 GGAGATGNCCTGGAAAACACAGCCAAATGTAATGC..... 372

129 ArgProProArg 132
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373 AGACCAAAAAA 384

seq_name: /sgn2_6/podata/2/ina/5B_COMB.seq:us-08-569-063C-12
 seq.documentation.block:
 ; Sequence 12, Application US/08569063C
 ; Patent No. 592839
 ; GENERAL INFORMATION:
 ; APPLICANT: ERIKSSON, Ulf
 ; APPLICANT: OLOFSSON, Birgitta
 ; APPLICANT: ALITALO, Kari
 ; APPLICANT: PAJUSOLA, Katri
 ; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B AND

seq_name: /cgn2_6/ptodata/2/ina/5A_COMB.seq : US-08-469-427A-1
 seq_documentation_block:
 Sequence 1, Application US/08469427A.
 Patent No. 5,601918
 GENERAL INFORMATION:
 APPLICANT: Eriksson, Ulf
 APPLICANT: Olofsson, Birgitta
 APPLICANT: Alitalo, Katri
 APPLICANT: Pajusola, Katri
 TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR-B ANTI
 TITLE OF INVENTION: DNA CODING THEREFOR
 NUMBER OF SEQUENCES: 17
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Evanson, McKeown, Edwards & Lenahan
 CITY: 1200 G Street, N.W., Suite 700
 STATE: Washington
 ZIP: 20005
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentin Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/469,427A
 FILING DATE: 06-JUN-1995
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/397,651
 FILING DATE: 01-MAR-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: Evans, Joseph D
 REGISTRATION NUMBER: 26,269
 REFERENCE/DOCKET NUMBER: 41979cp2
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 628-8800
 TELEFAX: (202) 628-8844
 SEQUENCE CHARACTERISTICS:
 LENGTH: 886 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: cDNA
 HYPOTHETICAL: NO
 ORIGINAL SOURCE:
 TISSUE TYPE: mouse embryo
 IMMEDIATE SOURCE:
 CLONE: pcf2
 US-08-469-427A-1
 alignment_scores:
 Quality: 95.50 Length: 104
 Ratio: 1.736 Gaps: 5
 Percent Similarity: 52.885 Percent Identity: 27.885
 alignment_block:
 US-09-662-783-4 x US-08-469-427A-1 ..
 Align seg 1/1 to: US-08-469-427A-1 from: 1 to: 886
 31 ArgTyrSerCysThrProArgAspTyrSerValAsnIleArgGluGluIle 47



Gencore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
M protein - protein search, using sw model
run on: September 26, 2001, 15:15:09 ; Search time 22.55 Seconds
(without alignments)
774.468 Million cell updates/sec
title: US-09-662-783-4
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minimum DB seq length: 0
maximum DB seq length: 2000000000
post processing: Minimum Match 0.8

ALIGNMENTS

14: sp_virus:
 red. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

卷之三

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3	338	45.9	345	13	Q9I946		Q9i946 gallus galli
4	328	44.6	345	4	Q9UL22		Q9ul22 homo sapien
5	328	44.6	345	4	Q9NRA1		Q9nra1 homo sapien
6	322	44.0	345	11	Q9QY71		Q9qy71 mus musculu
7	322	43.8	345	11	Q9EQX6		Q9ex6 ratus norv
8	316	42.9	345	11	Q9JHV8		Q9jhv8 mus musculu
9	107	14.5	326	11	Q95251		Q95251 ratus norv
10	103	14.0	354	4	Q43915		Q43915 homo sapien
11	103	14.0	358	11	P97946		P97946 mus musculu
12	97.5	13.2	150	054881	Q54881	rattus norv	Q54881 caenorhabdi
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15	89	12.1	418	13	Q57352		Q57352 coturnix co
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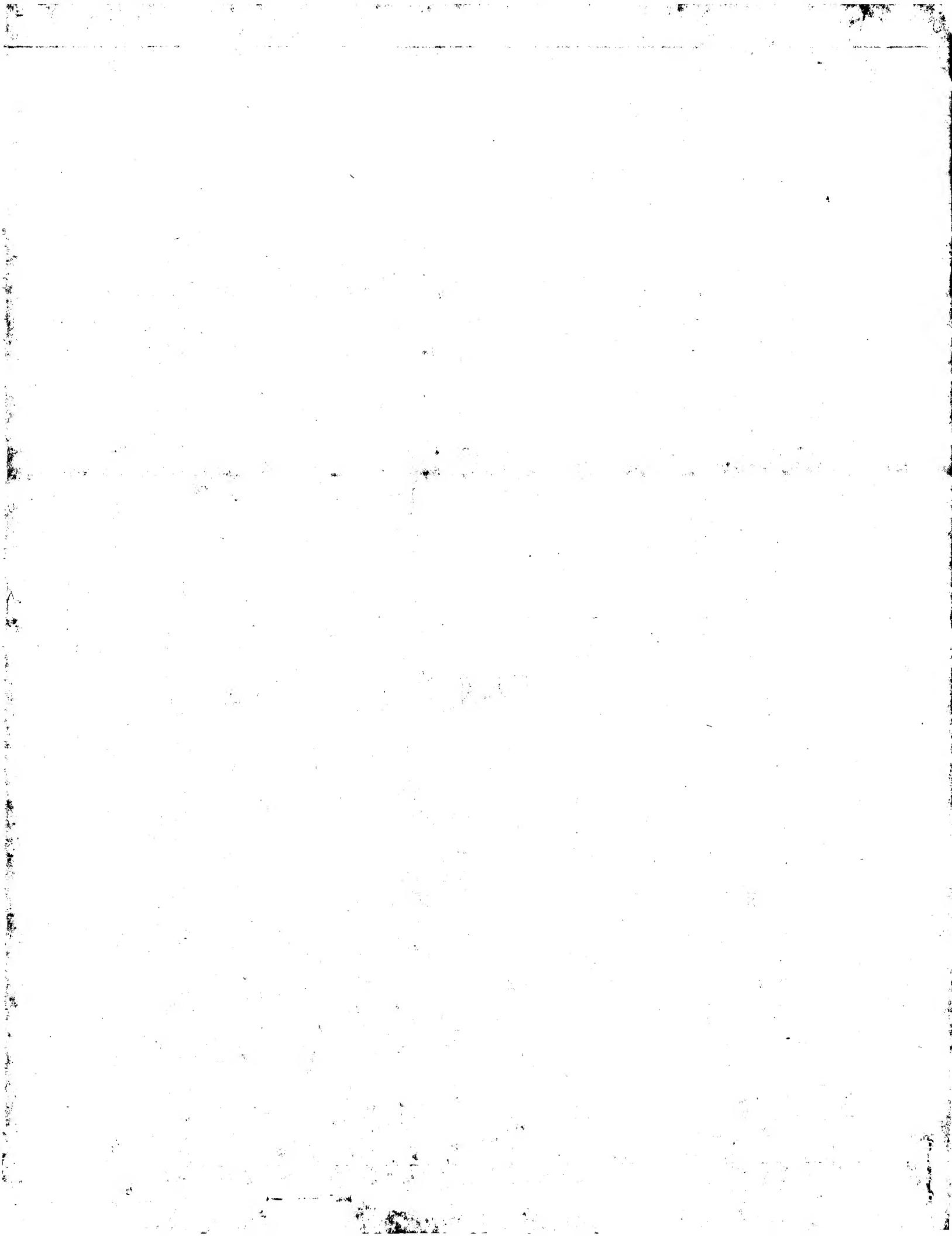
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DT 01-MAR-2001	(TREMBLrel. 16, Created)			
DT 01-MAR-2001	(TREMBLrel. 16, Last sequence update)			
DT 01-MAR-2001	(TREMBLrel. 16, Last annotation update)			
DE SPINAL_CORD DERIVED GROWTH FACTOR-B.				
RSCDFB_B.				
OS Rat				
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Rattus norvegicus (Rat).				
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.				
OX NCBI_TAXID=10116;				
RN [1]				
RP SEQUENCE FROM N.A.				
RA Hamada T., Ui-Tei K., Imaki J., Miyata Y.; "Molecular Cloning of SCDFB-B, a Novel Growth Factor Homologous to SCDFB/PDGF-C/fallostein."				
RT Biochem. Biophys. Res. Commun. 0:0-0(2000).				
DR EMBL; AB052170; BAB1B20.1; .				
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Matches 117; Conservative	10;	Mismatches 5; Indels 0; Gaps 0;		
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DB 239 LYMDTPRYGRGSYHDKRSKVDLNDKAJKRYSCTPRNNSYNIREELKLTNAVFFPRCLL 298				
QY 61 VQRCGGNGCGTVNWRSCCTCNSGKTVKKYHEVLQFEPGHIKRGRAKTMALVDIOLDHHE 120				
DB 299 VQRCGGNGCGGLNWKSCCTSSGKTVKKYHEVLQFEPGHIKRGRAKNMALVDIOLDHHE 358				
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DB 359 RCDICICSSRPPR	370			
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DT 01-OCT-2000	(TREMBLrel. 15, Created)			
DT 01-OCT-2000	(TREMBLrel. 15, Last sequence update)			
DT 01-MAR-2001	(TREMBLrel. 16, Last annotation update)			
DE SPINAL_CORD DERIVED GROWTH FACTOR.				
SCDFB.				
OS Gallus gallus (Chicken)				
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Gallus gallus (Aves); Neognathae; Galliformes; Phasianidae; Phasianinae;				
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RN [1]				
RP SEQUENCE FROM N.A.				
RC MEDLINE=20317014; PubMed=10858496;				
RC TISSUE-BRAIN;				
RC MEDLINE=20317014; PubMed=10858496;				
RA Hamada T., Ui-Tei K., Miyata Y.; "A novel gene derived from developing spinal cords, SCDFB, is a unique member of the PDGF/VEGF family.";				
RT FEBS Lett. 475:97-102(2000).				
DR EMBL; AF091434; AAF00049.1; -.				
DR EMBL; AB033831; BAB0326.1; -.				
DR InterPro; IPR000072; -.				
DR InterPro; IPR000859; -.				
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DR PROSITE; PS01180; CUB; 1.				
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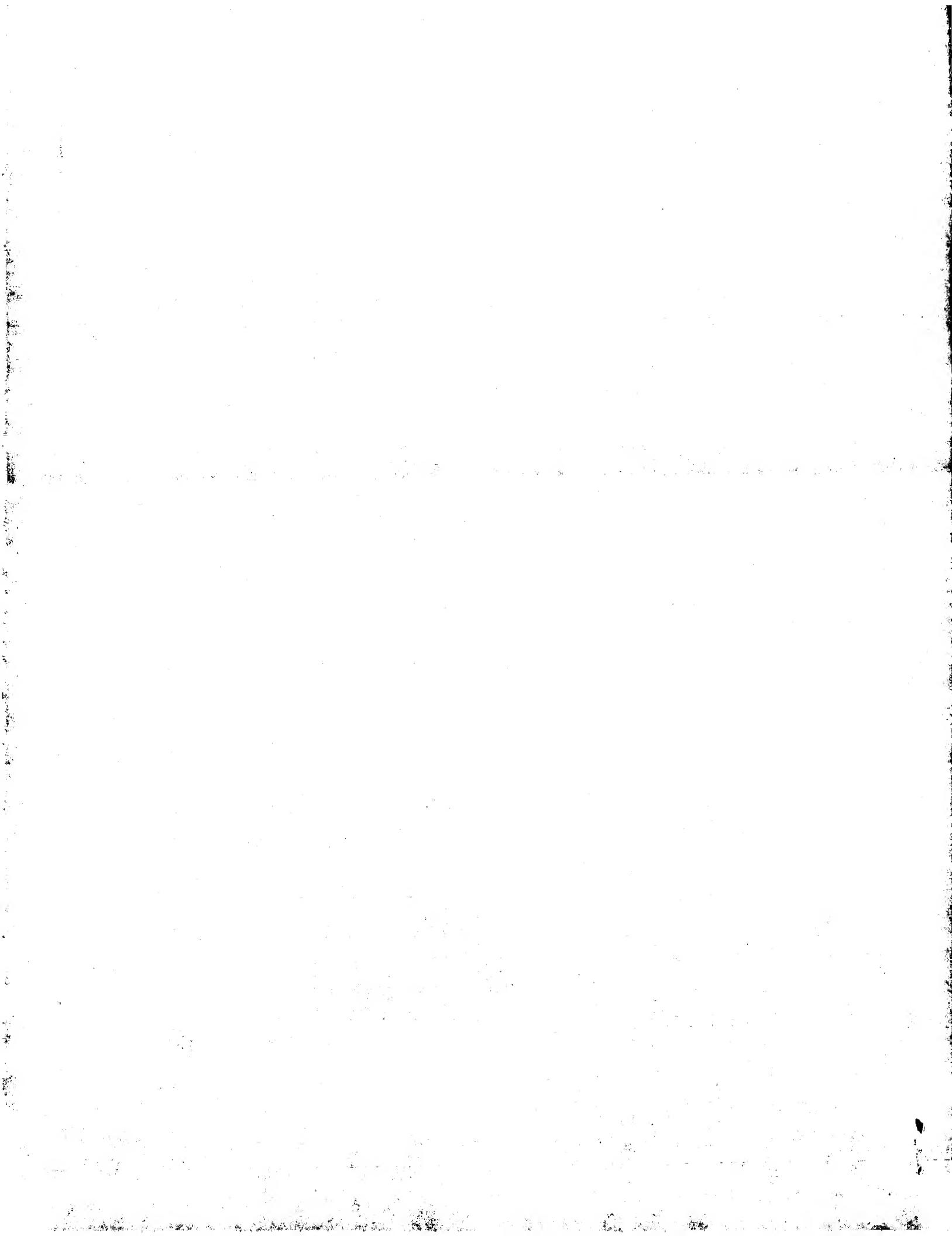
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QY	119	HERCDCIC 126		DR InterPro; IPR000072; -.
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AC		PRT;	345 AA.	DR SEQUENCE FROM N.A.
DT	01-OCT-2000 (TREMBLrel. 15, Created)			RT TISSUE-LUNG;
DT	01-OCT-2000 (TREMBLrel. 15, Last sequence update)			RA Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Uutela M.,
DT	01-MAR-2001 (TREMBLrel. 16, Last annotation update)			RA Backstrom G., Hellstrom M., Boström H., Li H., Soriano P.,
DE	PLATELET-DERIVED GROWTH FACTOR C.			RA Betscholtz C., Heldin C.-H., Alitalo K., Ostman A., Eriksson U.,
OS	Homo sapiens (Human).			RA "PDGF-C" is a novel protease-activated ligand for the PDGF alpha receptor";
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			RA Nat. Cell Biol. 0:0-0(2000). DR EMBL; AF244813; AAF00597.1; -.
CC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.			DR InterPro; IPR000072; -.
CX	NCBI_TAXID=9606;			DR InterPro; IPR000859; -.
RN	[1]			DR Pfam; PF00341; PDGF; 1.
RP	SEQUENCE FROM N.A.			DR PROSITE; PS050180; CUB; 1.
RA	Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Uutela M.,			DR PROSITE; PS50278; PDGF_2; 1.
RA	Backstrom G., Hellstrom M., Boström H., Li H., Soriano P.,			DR SMART; SM00042; CUB; 1.
RA	Betscholtz C., Heldin C.-H., Alitalo K., Ostman A., Eriksson U.,			DR SEQUENCE 345 AA; 39043 MW; 590889CEA55CC5EA CRC64;
RT	"PDGF-C" is a novel protease-activated ligand for the PDGF alpha receptor";			Query Match 44.6%; Score 328.5; DB 4; Length 345; Best Local Similarity 49.2%; Pred. No. 1.2e-28; Mismatches 63; Conservative 20; Indels 5; Gaps 3;
RC	RESULTS FROM N.A.			Query Match 44.0%; Score 324.5; DB 11; Length 345; Best Local Similarity 48.4%; Pred. No. 3.3e-28; Matches 62; Conservative 22; Mismatches 39; Indels 5; Gaps 3;
Q9EQX6	PRELIMINARY;	PRT;	345 AA.	Qy 1 MYLDTPRYGRRSY-HDRKS-KVDLRLNDDAKRYSTCPTNYSVNTREELKANYVFFPRC 58 Db 215 LYKPWQLLGKAFYGRKSFRVDSLNLTEEVRLSCTPNSVSTREELKRTDTIFWPGC 274
ID	Q9EQX6;	PRT;	345 AA.	Qy 59 LLVQRGGNGCCGTYNWRSCCTNSGKTVKYHEVQLRLP--KGVRGLHKSUTDVALBH 118 Db 275 LLVKRGGNGACCLHCNCQCVPSKVTKYHEVQLRLP--KGVRGLHKSUTDVALBH 331
AC		PRT;	345 AA.	Qy 119 HERCDCIC 126 Db 332 HEEDCVC 339
DT	01-MAY-2000 (TREMBLrel. 13, Created)			RESULT 8 Q9JHV8 PRELIMINARY; PRT; 345 AA.
DT	01-MAY-2000 (TREMBLrel. 13, Last sequence update)			DR SEQUENCE FROM N.A. RC TISSUE=OVARY; RA Tsai Y.-J., Lee R.K.-K., Chen Y.-H., Lin S.-P., Cheng W.T.-K.;

DR	SMART; SM00141; PDGF; 1;	MW; 2048D769D735173E CRC64;						
SQ	SEQUENCE 354 AA; 40444 MW;							
Query Match	14.0%	Score 103; DB 4; Length 354;						
Best Local Similarity	27.8%	Pred. No. 0.0017;						
Matches 35;	Conservative 17;	Mismatches 46;	Indels 28;	Gaps 6;				
QY	7 RYRGSRSHDKSKVYDRLNDKARYSCPRTNSVNIRBEL-KLANVVFPPRCILVQRG 65							
DB	88 RFAATFYDTELKV---IDEWQRTQSCPRTCEVASELGTSNTFFKPCVNVRFCG 143							
QY	66 GNCGGGTGVNWRSTCNSGKT---VKKYHEV---LQFEPGHIKRGRGAKTMALVIDLHH 119							
DB	144 GCC----NEESLQOMNTSISYKQLFPTSPVTPSVP-----EVLPVKVANH 186							
QY	120 ERCDCI 125							
DB	187 TGCKCL 192							
RESULT 11								
P97946		PRELIMINARY;	PRT;	358 AA.				
ID	P97946;							
AC								
DT	01-MAY-1997 (TREMBLrel. 03, Created)							
DT	01-MAY-1997 (TREMBLrel. 03, Last sequence update)							
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR D (C-FOS INDUCED GROWTH FACTOR).							
GN	VEGF-D OR FIGF.							
OS	Mus musculus (Mouse).							
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Rattus; Murinae; Muridae; Murinae; Mus.							
OX	NCBI_TaxID=10090;							
RN	[1]							
RP	SEQUENCE FROM N.A.							
RC	STRAIN=C57BL/6J;							
RX	*MEDLINE=970303054; PubMed=8876195;							
RA	Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.;							
RT	"Identification of a c-fos-induced gene that is related to the platelet-derived growth factor/vascular endothelial growth factor family.";							
RT	Proc. Natl. Acad. Sci. U.S.A. 93:11675-11675(1996).							
RN	[2]							
RP	SEQUENCE FROM N.A.							
RC	TISSUE=LUNG;							
RX	*MEDLINE=97349118; PubMed=9205122;							
RA	Yamada Y., Nezu J., Shimane M., Hirata Y.;							
RT	"Molecular cloning of a novel vascular endothelial growth factor, VEGF-D".							
RT	Genomics 42:483-488(1997).							
RL	DR EMBL; X99572; CAA67892.1;							
DR	DR EMBL; D89628; BAAL4002.1;							
DR	HSSP; P15672; IVPP.							
DR	MGI; MGI:108037; Figrf.							
DR	InterPro: IPR000072; .							
DR	Pfam; PF00341; PDGF; 1.							
DR	ProDom; PD001629; .; 1.							
DR	PROSITE; PS00249; PDGF_1.							
DR	PROSITE; PS50278; PDGF_2.							
DR	SMART; SM00141; PDGF; 1.							
SQ	SEQUENCE 358 AA; 40908 MW;	6636B17FBF07037C CRC64;						
Query Match	14.0%	Score 103; DB 11; Length 358;						
Best Local Similarity	27.0%	Pred. No. 0.0017;						
Matches 34;	Conservative 17;	Mismatches 47;	Indels 28;	Gaps 6;				
QY	7 RYRGSRSHDKSKVYDRLNDKARYSCPRTNSVNIRBEL-KLANVVFPPRCILVQRG 65							
DB	93 RFAATFYDTELKV---IDEWQRTQSCPRTCEVASELGTSNTFFKPCVNVRFCG 148							
QY	66 GNCGGGTGVNWRSTCNSGKT---VKKYHEV---LQFEPGHIKRGRGAKTMALVIDLHH 119							
Db	149 GCC----NEEGVMCMNTSVNIRBEL-KLANVVFPPRCILVQRG-----ELVPVKVANH 191							
QY	120 ERCDCI 125							
Db	192 TGCKCL 197							
RESULT 12								
054881		PRELIMINARY;	PRT;	150 AA.				
ID	054881;							
AC	054881;							
DT	01-JUN-1998 (TREMBLrel. 06, Created)							
DT	01-JUN-1998 (TREMBLrel. 06, Last sequence update)							
DR	01-MAR-2001 (TREMBLrel. 16, Last annotation update)							
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR B (FRAGMENT).							
OS	Rattus norvegicus (Rat).							
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.							
NCBI_TaxID=10116;								
OX	[1]							
RN	SEQUENCE FROM N.A.							
RC	TISSUE=HEART;							
RA	Weil J., Eschenhagen T., Mittmann C., Schoitz H.;							
RL	Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.							
EMBL; AF02952; AAH95447.1;								
HSSP; P15692; 1VPP.								
InterPro: IPR000072; .								
DR Pfam; PF00341; PDGF; 1.								
DR PROSITE; PS00249; PDGF_1.								
DR PROSITE; PS50278; PDGF_2.								
DR SMART; SM00141; PDGF; 1.								
FT NON_TER 1								
FT 150 AA;	17243 MW;	E2AC5CA9AD94F6A CRC64;						
SQ SEQUENCE [1]	150 AA;	17243 MW;						
Query Match	13.2%	Score 97.5; DB 11; Length 150;						
Best Local Similarity	28.8%	Pred. No. 0.0029;						
Matches 30;	Conservative 15;	Mismatches 38;	Indels 21;	Gaps 5;				
QY	31 RYSGTPRNSVNIRELLIANVV--FFPRCLLYORCGNGCCTNNSGTKVKK 88							
Db	13 RATCOPREVVPPLSMEF NGNVYKQFPVSCVTvQRGC--GCCPDGGLECVPHQVRM 68							
QY	89 YHEV1QFEGHIIKRRGAKTMAVLDIQDHHERCDICCSRPRR 132							
Db	69 QILMIQY -----PSQLGEMSLBEHSQCCEC---RPRKR 97							
RESULT 13								
Q9N413		PRELIMINARY;	PRT;	304 AA.				
ID	Q9N413;							
AC	Q9N413;							
DT	01-OCT-2000 (TREMBLrel. 15, Created)							
DT	01-OCT-2000 (TREMBLrel. 15, Last sequence update)							
DR	01-MAR-2001 (TREMBLrel. 16, Last annotation update)							
DE	Y3943CL_6 PROTEIN.							
GN	Y3943CL_6							
OS	Caenorhabditis elegans.							
OC	Rhabditida; Nemataoda; Chromadorea; Rhabditida; Rhabditidae; Caenorhabditis; Rhabditidae; Paloderrinae; Caenorhabditis.							
NCBI_TaxID=6239;								
OX	[1]							
RN	SEQUENCE FROM N.A.							
RC	STRAIN=BRISTOL N2;							
RX	MEDLINE=98069613; PubMed=9851916;							
RA	None;							
RT	"Genome sequence of the nematode <i>C. elegans</i> : a platform for investigating biology. The <i>C. elegans</i> Sequencing Consortium.";							
RT	Science 282:2012-2018(1998).							
RL	[2]							
RN	SEQUENCE FROM N.A.							

QY 129 -RP 130
| |
Db 298 VRP 300

Search completed: September 26, 2001, 15:17:06
Job time: 117 sec





PT Oestman A, Heldin C;
 XX WPI; 2000-376495/32.
 DR N-PSDB; AAP00737.
 XX PT Novel polynucleotides encoding a novel growth factor of cells
 expressing a platelet-derived growth factor, useful for diagnostic and
 therapeutic applications, e.g. concerning cancer -
 XX PS Claim 25; Fig 6; 111pp; English.

The present sequence is an N-terminally truncated polypeptide of human Platelet derived growth factor (PDGF)-D, formally known as Vascular Endothelial Growth Factor (VEGF)-G. It is derived from human foetal lung lambdgt10 cDNA library. It belongs to the VEGF/PDGf family. It functions as an activator of proliferation, differentiation, growth and motility of cells, that express PDGF-D receptor. This sequence is useful for inhibiting the growth of tumours, that express PDGF-D. Expression of PDGF-D and its proteolytic cleavage for generating an activated truncated form is useful for regulating receptor binding specificity of PDGF-D. PDGF-D antagonist is useful for inhibiting tissue remodelling during the invasion of tumour cells into normal cells. PDGF-D may be used to treat wounds, atherosclerosis, metastasis and migration of smooth muscle cells.

XX Sequence 322 AA;

Query Match 100.0%; Score 737; DB 21; Length 322;
 Best Local Similarity 100.0%; Pred. No. 1.1e-73;
 Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy . 1 MYLDTPRYGRGRSYHDKRSKYKVDLNDAKRYSCTPRNYSYNIREELKLANVFPRLCLL 60
 Db 191 myldtpygrgrsyhdkrskykvdldndakrystcprnysynireelklanvfprlcll 250
 Qy 61 YRCGGNCGGTVMNNRSCTCNNSGKTVKKYHEVLOFEPGHIKRGRAKTMALVDIQLDHHE 120
 Db 251 vrcggngcgcgvnwsctnsqktvkkyhevlqfepghikrgraktmalvdigldhhe 310
 Qy 121 RDCDCSSRPPR 132
 Db 311 rdcicssrppr 322

PA (ZYMO) ZYMOGENETICS INC.
 XX PI Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;
 XX DR WPI; 2000-687541/67,
 DR N-PSDB; AAC81555.
 XX PT Growth factor homologs and the nucleic acids that encode them, useful
 PT e.g. for treating liver damage, ischaemia, multiple sclerosis and
 PT Alzheimer's disease -
 XX PS Claim 1; Page 110-111; 143pp; English.

The invention relates to the human growth factor homologue zvegf4 (AAC81555), and nucleic acids encoding it (AAC81555). Zvegf4 is a member of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial growth factor) family. Zvegf4 has a growth factor domain (AA84653) characterised by a PDGF cystine knot structure, and a CUB domain (AA84655) which has a beta barrel structure. Zvegf4 has PDGF-like activity, having mitogenic activity on fibroblasts, vascular smooth muscle cells and pericytes, and has also been shown to stimulate bone growth. The invention also relates to fusion proteins comprising human zvegf4 or fragments thereof, particularly human zvegf4/human zvegf3 fusions; expression constructs and host cells comprising human zvegf4; an antibody nucleic acids; the recombinant expression of human zvegf4; an antibody which binds to human zvegf4 or a fragment thereof; a method of activating a cell-surface PDGF receptor using a zvegf4-derived polypeptide; a method of modulating the proliferation, differentiation, migration or metabolism of bone cells, comprising exposing bone cells to zvegf4-derived polypeptides; and a method of detecting a genetic abnormality in the zvegf4 gene of a patient. Zvegf4 proteins and derived fragments may be used to stimulate tissue development or repair, or cellular differentiation or proliferation. They are particularly useful for the treatment or repair of liver damage, and may also be used to modulate neurite growth (e.g., in the treatment of Alzheimer's disease or multiple sclerosis). Due to their osteogenic activity, they may be used in the treatment of periodontal disease and fractures. They may also be used to enhance expansion and mobilisation of haematopoietic stem cells and endothelial precursor stem cells, which may be useful in the treatment of ischaemia, in wound healing, and in the modulation of the immune system. The present sequence represents human zvegf4.

XX Sequence 370 AA;

RESULT 2
 AB48653 standard; Protein; 370 AA.
 ID AB48653
 AC AAB48653;
 DN 09-MAR-2001 (first entry)
 XX DE Human growth factor homologue zvegf4, SEQ ID NO:2.
 XX KW Human; zvegf4; growth factor homologue; VEGF/PDGf family;
 KW CUB domain; PDGF-like activity; mitogenic; osteogenic;
 KW neovascularisation; tissue repair; proliferation; differentiation;
 KW liver damage; neuroregeneration; Alzheimer's disease; multiple sclerosis;
 KW Periodontal disease; bone fracture; wound healing; vulnerability; ischaemia;
 KW immunomodulation; hepatic; chromosome 11q22.3-23.1.
 OS Homo sapiens.
 XX PN WO20066736-A1.
 XX PD 09-NOV-2000.
 PF 03-MAY-2000; 2000WO-US40047.
 XX PR 03-MAY-1999; 99US-0304216.
 PR 10-MAY-1999; 99US-0164463.
 PR 04-FEB-2000; 2000US-0180169.
 XX

Query Match 100.0%; Score 737; DB 21; Length 370;
 Best Local Similarity 100.0%; Pred. No. 1.1e-73;
 Matches 132; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MYLDTPRYGRGRSYHDKRSKYKVDLNDAKRYSCTPRNYSYNIREELKLANVFPRLCLL 60
 Db 239 myldtpygrgrsyhdkrskykvdldndakrystcprnysynireelklanvfprlcll 298
 Qy 61 YRCGGNCGGTVMNNRSCTCNNSGKTVKKYHEVLOFEPGHIKRGRAKTMALVDIQLDHHE 120
 Db 299 vrcggngcgcgvnwsctnsqktvkkyhevlqfepghikrgraktmalvdigldhhe 358
 Qy 121 RDCDCSSRPPR 132
 Db 359 rdcicssrppr 370

RESULT 3
 AAY96864 standard; Protein; 370 AA.
 ID AAY96864
 AC AAY96864;
 DN 26-SEP-2000 (first entry)
 XX DE SEQ. ID. 37 from WO0034474.
 XX KW Vascular endothelial growth factor; homolog; zvegf3; CUB domain;

